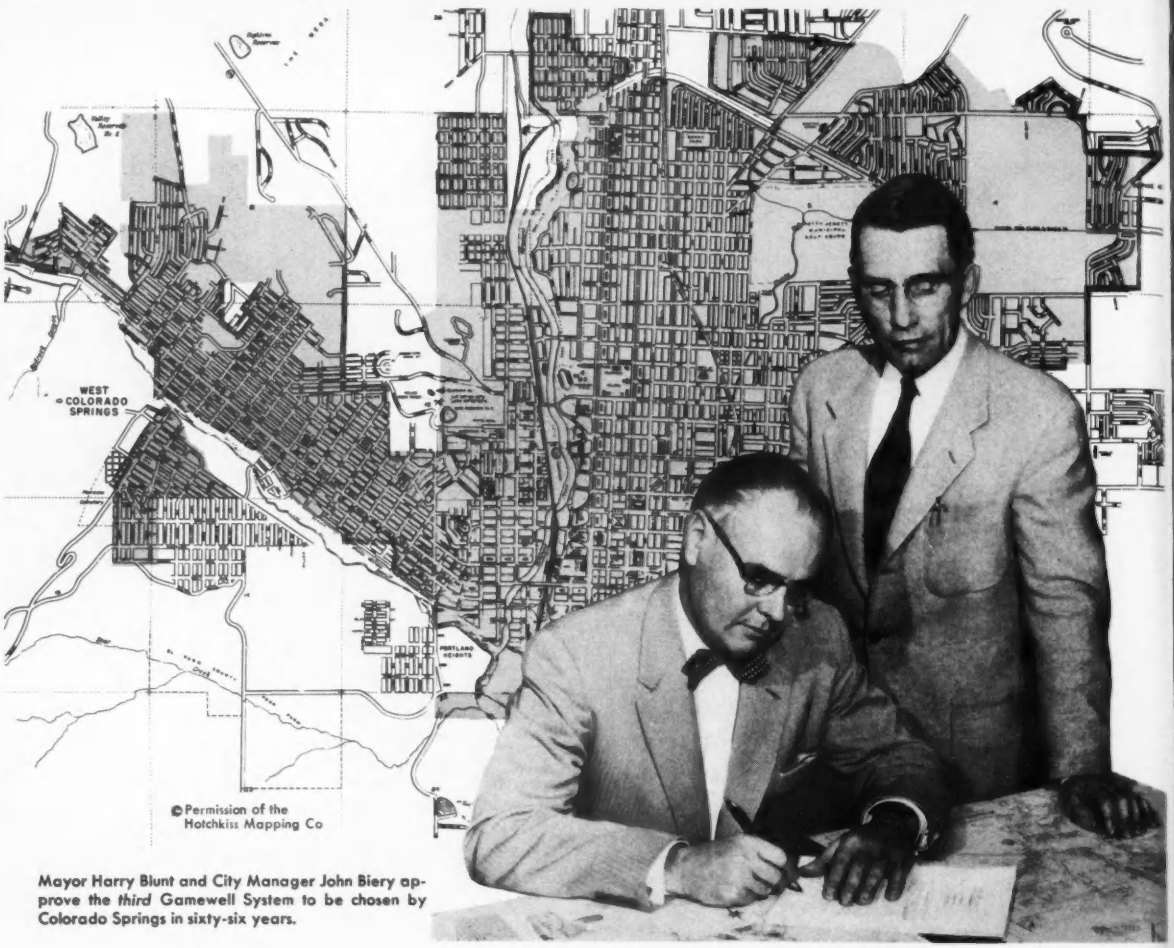
APRIL 1956

FIREMEN

SIXTIETH YEAR · NATIONAL FIRE PROTECTION ASSOCIATION

VOLUME 24, NUMBER 4, COPYRIGHT 1956 NATIONAL FIRE PROTECTION ASSOCIATION PRINTED IN U. S. A.



Mayor Harry Blunt and City Manager John Biery approve the *third* Gamewell System to be chosen by Colorado Springs in sixty-six years.

Colorado Springs Buys Third Gamewell System

City-wide survey basis for specifying municipally-owned coded fire alarm telegraph network.

That faithful red fire alarm box on the corner is growing hand-in-hand with Colorado Springs. The original Gamewell System was installed in 1889, followed by a second system in 1914. The third, now being installed, was selected after an exhaustive cost and safety comparison with voice-type service.

Gamewell helped Colorado Springs expand its fire protection to meet modern growth and high value concentrations by making a city-wide survey in 1954. The detailed report, with maps, costs and recommendations, showed how a coded telegraph system gives the entire community, *safe*, fast and reliable alarm facilities to meet all their needs exactly.

Call for a Gamewell Survey

Don't fall behind the growth pattern of your city. A Gamewell Survey can pin-point — and anticipate — alarm system requirements. Use it to get up-to-date and stay up-to-date . . . a Gamewell fire alarm system costs less and gives maximum protection.

THE GAMEWELL COMPANY
NEWTON UPPER FALLS 64, MASSACHUSETTS
In Canada: Northern Electric Co., Ltd., Belleville, Ont.

Remember — a Gamewell System is
FIRST when SECONDS Count!

GAMEWELL®

THE BOX IS POSITIVE
Reduces Human Error

'WAY UP

GOES THE EFFICIENCY RATING...

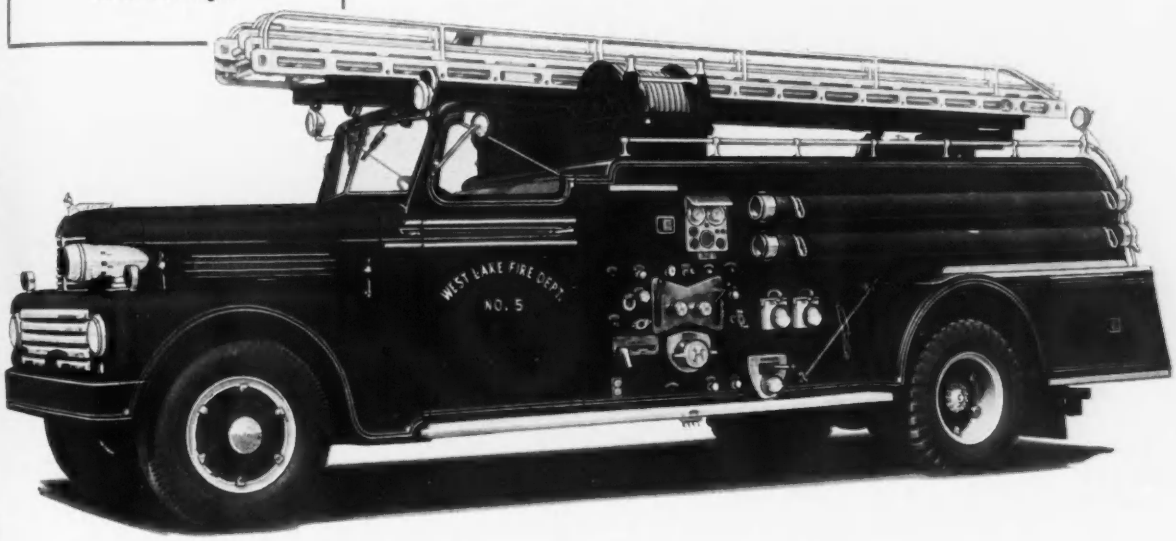
when it's a

HOWE PUMPER

equipped with

Junior Aerial Ladder

Electrically Operated Ladder
Manual Controls for Emergency Use
50 or 65 ft. lengths



HOWE PUMPERS equipped with junior aerial ladders are wise investments. For use as a water tower to mount a deluge nozzle and for rescue work, the sturdy junior aerial ladder is the answer to many an otherwise baffling problem in small communities.

The progressive West Lake Fire Department, Erie, Pennsylvania, (which ordered its first truck from HOWE upon the department's organization in 1937), owns the new pumper shown—a custom-built Howe DEFENDER with 260 H.P. Waukesha engine. The ladder can be operated at the same time as the 750 GPM pump. Alternator is a 100 ampere Leece-Neville unit with 250 watt transformer and two 110 volt outlets. A 200 gallon booster tank and ample running board compartments are among the features. Note the compact overall assembly of this pumper.

Here is a fire truck engineered for efficiency. Before YOU buy . . . phone, write or wire HOWE!

HOWE

Member FAM (Fire Apparatus Manufacturers Association)

HOWE

"dependable fire apparatus since 1872"

FIRE APPARATUS COMPANY

Dept. FE9, 1400 W. 22nd St., Anderson, Ind., U. S. A.

WOOSTER *VARI-A-FOG

A prize-winning name for a praise-winning nozzle

Now — a nozzle that does everything you want a nozzle to do — and do it more effectively, faster, easier. The new Wooster Vari-A-Fog meets every fire-fighting situation with the right answer right at your finger tips.

You simply dial your stream pattern — from a 90° wide angle right down to a straight stream, in less than one complete turn of the barrel. Positive, click-stop settings give you a full choice of dense fog patterns without hollow spots, and a solid straight stream projection of 125 feet at 100 GPM. Lower GPM streams are available for mop up by turning barrel below straight stream setting.

The 1½" size Vari-A-Fog is regularly available in 3 GPM ratings:

(a) 30° fog at 100 PSI — 125 GPM
(b) 30° fog at 100 PSI — 100 GPM
(c) 30° fog at 100 PSI — 75 GPM

THESE ARE THE IMPORTANT FEATURES

1. Chromed hard bronze baffle plate for stream pattern control.
2. Perforated edge for dense, uniform fog pattern — no hollow spots.
3. Non-slip, heavy duty rubber grip extends over nozzle end for sure impact protection.
4. Five positive click-stop stream positions. Straight stream, 15°, 30°, 60° and 90° fog. Mechanism entirely enclosed — nothing to catch — no way to freeze.
5. Smooth, easy turning at all pressures.
6. Rugged and rigid stream setting indicator.
7. Ball Valve shut-off control. Easy acting and non-locking at all pressures.
8. Large, roomy handle for gloved hand operation.
9. Full 1-inch, non-interrupted waterway. Delivers water to discharge without intermediate chamber friction loss.
10. Floating ball action is self-sealing and self-compensating for wear.
11. Strong one-piece body for stability and streamlined appearance.
12. Unique double-stop design provides positive valve alignment in open and closed position.

* For more complete information, or for a demonstration in your department without obligation, please use the coupon below.

Name .....
Title .....
Address .....
City .....
State .....

WOOSTER BRASS DIVISION
THE FYR-FYTER COMPANY • WOOSTER, OHIO

BARTON-AMERICAN
Front-Mounted Pump

easier to operate— simplest to install—and superior mechanically!

DELIVERED COMPLETE WITH PTO—READY TO MOUNT—

Save time and trouble! When you order a Barton-American Type UA Front-mounted Pump, just list the make and model of your truck. Your pump will be delivered *complete* with *factory engineered* PTO (power take-off) shaft, universal joints and pump gear ratios best suited to *your* truck's engine.

When you consider *any* front pump *without* complete PTO equipment, you can't be sure the mechanic who mounts it will properly solve the technical problems of torque load, angularity and crankshaft pulley design and installation.

With the UA, however, *you take no chances* on makeshift PTO design or engine overheating caused by improper installation. Even the newest trucks with low fan mountings will be properly fitted.

And simpler installation with factory-engineered drive is just part of the story. The UA Pump also gives you many other superior features—for peak performance and low maintenance.

Write Today for Bulletin 8330-B—and ask about our exclusive Service Pump Plan.

THESE UA PUMP FEATURES ARE WORTH HAVING!

- *Exclusive*, positive interlocking pump clutch that can't slip at a fire.
- Both volume and high-pressure to 400 pounds for effective fog streams.
- Fights fire while truck is moving.
- Fast, reliable, engine vacuum primer.
- Better weight distribution on chassis.
- Effective frost-proof construction.
- Less pump weight—you can carry more water or extra equipment.
- Pump gear ratio suited to your engine.
- Convenient controls, top-quality pump materials and precision construction.
- Both simplicity and front location of pump make maintenance fast and easy—a great help to volunteer departments.

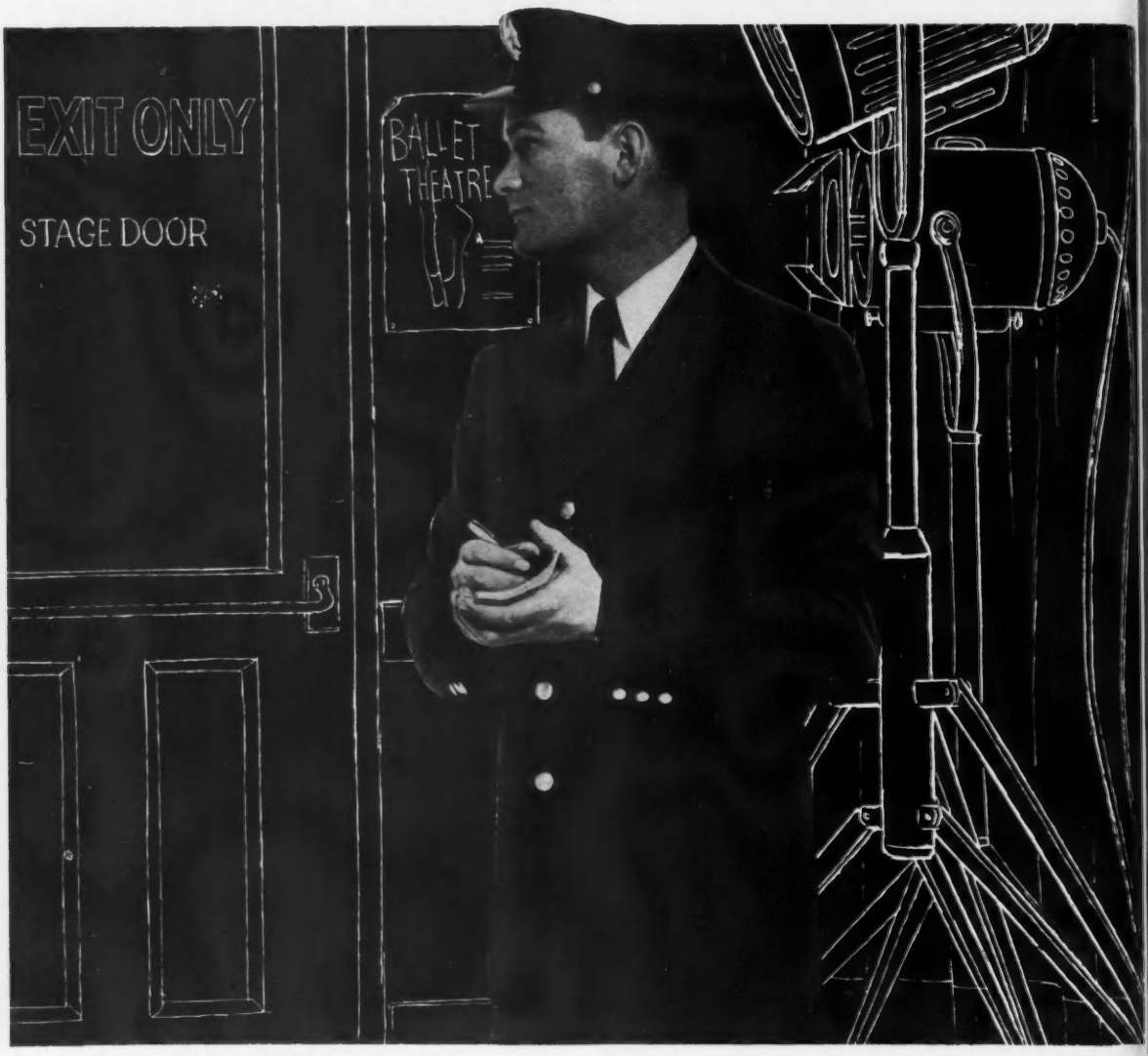
P.T.O. DRIVE IS ENGINEERED TO SUIT YOUR TRUCK —ANY MAKE OR MODEL CHASSIS.

AMERICAN-MARSH PUMPS

BATTLE CREEK MICHIGAN

In Canada:
American-Marsh Pumps (Canada) Ltd., Stratford, Ont.

Lightweight uniforms of "Dacron" and wool are extra-durable . . . stay neat round the clock



All the comfort of a tropical weight—all the durability of a heavier weight! "Dacron"* blended with wool gives you both advantages in lightweight uniforms as handsome as they are practical.

A strong fiber, "Dacron" polyester fiber adds extra durability to the entire uniform—particularly important at cuffs, elbows and other points of wear. And what a help it is to neatness! Uniforms of "Dacron" and wool hold a press through all kinds of weather, even in rain; shed wrinkles easily; keep their trim shape.

Upkeep is easy and economical. Fewer pressings are required, and many spots can be easily removed with a damp cloth. Add in the long service life of these uniforms and what savings in time and money you have!

Give all your men the practical advantages of tropical-weight uniforms of "Dacron" and wool. Be sure to ask your uniform supplier about them.

DACRON
REG. U. S. PAT. OFF.

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

E. I. du Pont de Nemours & Co. (Inc.)
Textile Fibers Department
Wilmington 98, Delaware

*"Dacron" is Du Pont's registered trademark for its polyester fiber. Du Pont makes fibers, does not make the fabric or uniform shown here.

YOU EXPECT THE BEST FROM AKRON BRASS

– here it is . . .

Entirely New

PDQ

FOG NOZZLE

★ Resilient rubber bumper for protection against damage

★ Adjustable through all angles of fog

★ Positive stream positioning — by feel or sight. Clicks into fog patterns or straight stream

★ Swivelling "Rocker Lug" base — handle is always on top

★ You too will agree — finest nozzle of its type

★ Corrugated no-slip grip

★ High gallonage

★ Easy pattern indicators

★ Akron quality ball shut-off

★ Man-size handle

PERFORMANCE DATA
at 100 P.S.I. Nozzle Pressure

STYLE	SIZE	GPM	PRICE	
			PB	CP
1209	¾"-1"	24	$67.50	$72.00
1218	1½"	95	72.00	76.50
1219	1½"	125	72.00	76.50
1229	2½" for PP	250	78.50	84.00
1239	2½" Dir. Con.	250	92.00	97.50
1249	2½" with PP	250	102.00	115.50

AKRON BRASS

FIRE FIGHTING EQUIPMENT

Akron Brass Mfg. Company, Inc. • Wooster, Ohio

TRAGEDY COMES TO LEXINGTON. This tank truck jackknifed, tipped over on its side and traveled about 100 feet in that position. Sparks showered up from beneath the truck and it ignited. The driver was killed.

Rockwood FOAM controls tank truck fire in minutes!

Here is the true story from the pages of the Boston Globe and eye-witnesses

It was Thursday, March 17, 1955, 9:30 a.m. A tank truck was stopping at a traffic light on the Concord Turnpike in Lexington, Massachusetts. Suddenly, it jackknifed. There was a puff of smoke, and then flames. The driver was hurled onto the roadway. His clothes were aflame and he collapsed. Onlookers said flames reached 200 feet in the air.

Minutes later, in answer to a telephone alarm, Engine 2 of the East Lexington Station was on the scene. Flames whipped by winds and fed by several thousand gallons of gasoline were sweeping across the road and scorching the surrounding trees. Black smoke billowed into the air.

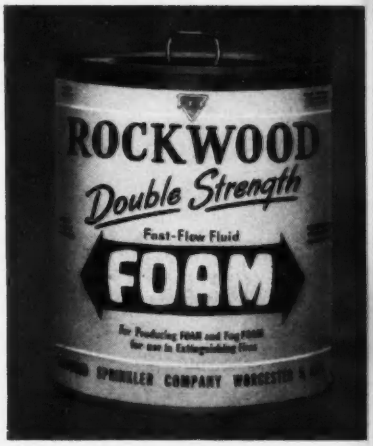
Roy A. Cook, Chief Engineer of the East Lexington Station, ordered Engine 2, which carries 500 gallons of water, to hold back the flames until Engine 1, carrying Rockwood FOAM, could be put into action.

Soon Engine 1, equipped with a 1½" Rockwood FOAM eductor plus the new type SG-60 FOAM nozzle with adapter for straight stream and FogFOAM, was at the scene. *With this Rockwood equipment and FOAM, Engine 1 brought the fire under control.*

Does your city have this protection? With ever-increasing traffic, more filling stations and more tank trucks on the road, the frequency of gasoline fires is on the increase.

When tragedy came to Lexington, headlines told a grim story. But a major catastrophe was prevented because the East Lexington Station was prepared with Rockwood products.

Be prepared. Put this great fire fighter to work for you. Specify Rockwood Automatic FOAM Proportioning Systems, Rockwood FogFOAM nozzles and FOAM liquid when you order a fire truck.



ROCKWOOD DOUBLE-STRENGTH FOAM LIQUID, 3 parts mixed with 97 parts water, forms a solid FOAM blanket that quickly re-seals itself. Available in 5 gallon drums.

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

Distributors in all principal cities

SEND FOR THIS INFORMATIVE BOOKLET

ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
1011 Harlow Street
Worcester 5, Mass.

Please send me your illustrated booklet on Rockwood fire fighting products.

Name.....
Title.....
Company.....
Street.....
City.....*Zone*....*State*.....

OLD AGE NEVER BOTHERS AN INDIAN!

MANY INDIAN FIRE PUMPS

ARE STILL IN SERVICE AFTER 20 YEARS . . .

Designed and built to take punishment,
INDIAN FIRE PUMPS stay on the job for years with little or no maintenance.

No. 90 SLIDING PUMP TYPE

"We discarded soda acid type extinguishers and equipped with **INDIAN FIRE PUMPS** which give great satisfaction with only clear water. Our new truck is equipped with **INDIANS** instead of the usual chemical extinguishers. We cannot praise them too highly."
Chief H. B. Wells,
Newbury, S. C.

Both types of INDIAN FIRE PUMPS are approved by UNDERWRITERS' LABORATORIES.

No. 80 LEVER TYPE PUMP and HANDLE

HEAVY SEAMLESS BRASS PUMP QUICKLY REMOVED
STEEL LOOP HOLDS PUMP LEVER IN POSITION WHEN NOT IN USE
ALL BRASS ADJUSTABLE NOZZLE
PUMP LEVERS HEAVY STEEL
NO. 80
HEAVY, ADJUSTABLE, SNAP END CARRYING STRAPS
PISTON—HEAVY SYNTHETIC RUBBER FOR LONG SERVICE, EASILY REPLACED
1-PIECE BRASS PUMP CUP
RUST PROOF
PATENTED
AIR-CONDITIONED
5 GALLON TANK

TANK MADE OF ARMCO ZINCGRIP STEEL OR SOLID COPPER. ARMCO IS FAR SUPERIOR TO ANY GALVANIZED METAL.

SEND FOR NEW CATALOG

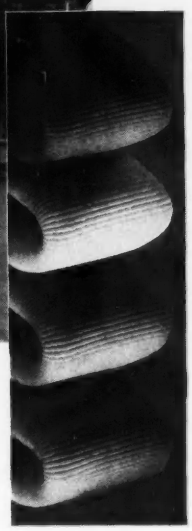
H. B. SMITH & CO.
"FOR 70 YEARS THE LEADERS"
208 Main St., Utica 2, N. Y.

Hercules Equipment & Rubber Company, Inc.
San Francisco 7, Calif.
Holbein Supply Co.
Los Angeles 15, Calif.

PACIFIC COAST BRANCHES
Fred E. Barnett Co.
Portland, Oregon
Fred E. Barnett Co.
Klamath Falls, Oregon
Mill & Mine Supply, Inc.
Seattle 4, Washington
L. M. Curtis & Sons
Salt Lake City, Utah

CANADIAN AGENTS
Fleck Bros. Limited
Vancouver, B. C., Canada
C. E. Hickey & Sons, Ltd.
Hamilton, Ont., Canada

Photo by Phila. Fire Dep't.



Here is the fire hose for QUICK ACTION...EASY HANDLING COMPACT STORAGE

Save time by ordering Quaker-Quaker Pioneer fire hose from nearest distributor. We'll gladly send you his name together with free brochure containing worthwhile information on fire hose. Write.

Flexible for speedy transfer from truck to fire! Lightweight for easy, strain-free handling! Flat-folding for more footage with less bulk in truck space! These are some of the reasons why fire departments standardize on this Fire Hose of extra sturdy DuPont Dacron. Compared to conventional hose, this fire-fighter withstands 50% greater pressure. Also, it resists heat, chemicals, abrasion. Saves time, too . . . because of the strong quick-drying Dacron filler thread combined with double cotton warp jacket surrounding its nonporous tube. Rigidly tested under hydrostatic pressures far in excess of those they would normally get in action. Available in Delaware-Victor Brand rated for 600 pounds and Bond Battleship Brand rated for 400 pounds. For water and chemical fire hose for every industrial need specify Quaker-Quaker Pioneer.

DIVISIONS OF HKP H. K. PORTER COMPANY, INC.

H. K. PORTER COMPANY, INC.

QUAKER RUBBER DIVISION
Philadelphia 24, Pa.

QUAKER PIONEER RUBBER DIVISION
San Francisco 7, California

Firemen

Volume 23 — Number 4

WARREN Y. KIMBALL — EDITOR
PAUL R. LYONS — ASSOCIATE EDITOR
HENRY S. GERE — ADVERTISING MANAGER

Published monthly for the fire service members of the
NATIONAL FIRE PROTECTION ASSOCIATION

A VOLUNTARY NON-PROFIT ORGANIZATION
60 BATTERYMARCH ST., BOSTON 10, MASS.

PERCY BUGBEE	GENERAL MANAGER
ROBERT S. MOULTON	TECHNICAL SECRETARY
HORATIO BOND	CHIEF ENGINEER
CHARLES S. MORGAN	ASSISTANT GENERAL MANAGER
GEORGE H. TRYON, III	ASSISTANT TECHNICAL SECRETARY
CHESTER I. BABCOCK	FIRE RECORD MANAGER
RICHARD E. STEVENS	FIRE RECORD DEPARTMENT
CHARLES L. SMITH	ELECTRICAL FIELD ENGINEER
MILES E. WOODWORTH	FLAMMABLE LIQUIDS ENGINEER
CLARK F. JONES	GASES ENGINEER
ROBERT W. SCHUETTE	PUBLIC RELATIONS MANAGER

Contents for April 1956 — *Page*

Thoroughness, the Essence of Pre-Fire Planning 12
For Motion Picture Operators 15
Flammable Liquids Notebook 16
Command Decisions, Part II, by Warren Y. Kimball 18
Modernization or Volunteers 19
"Spelling Out" Fireground Procedure 20
Disaster Truck for Red Cross, by Chandler J. Blackinton . . . 22
Chief of LAFD 24
Box 21's Annual Report 24
Letter to FIREMEN 25
ADT Expands 26
Philadelphia Training 28
New Members in NFPA 28
Useful Brochure on Oil Burners 30
Fire Protection for Thruway? 30
Training School in Marinette 31
New Items of Fire Equipment 32
Index to Advertisers 32
What To Do About Mailbox Fires 34
Can You Top This? 35

Protective Legislation Needed?

Newspapers report that verdicts involving sums which totaled $37,000 were returned against the driver of a ladder truck who was sued after the truck, when responding to an alarm, went over a sidewalk and injured two persons. A directed verdict absolved the ladder truck's tillerman. The plaintiff's suit was dropped against the city which owned the fire apparatus and was responsible for furnishing fire protection.

This matter can have a far reaching effect on municipal fire protection. Can a municipal fire fighter afford to expose himself to damages approaching nine years, salary for the "privilege" of risking life and limb when under orders to drive emergency apparatus? If he has a home, or other property, this may be jeopardized, as well as the welfare of his own family. Can fire fighters buy special insurance to protect them when operating emergency vehicles? No doubt the rates would be considerable. What, if any, is the responsibility of the fire company officer to see that the vehicle which he commands is operated safely? If he urges haste who is responsible when an accident occurs?

In the past, fire protection has been considered a governmental function and damage caused by fire apparatus responding to alarms has not been recoverable, except at the discretion of the city officials. Certainly, negligence would have to be proven to assess damages in such a situation. Should not the municipality assume responsibility for the acts of its employees when they are acting under orders? In this instance it may be that the city authorities will come to the aid of their employee and voluntarily assume the costs.

We are concerned with the protection of men who assume the risks of operating heavy fire apparatus through congested traffic and narrow streets, under emergency conditions and under all sorts of unfavorable circumstances. What will be the result in this country if fire fighters become reluctant to assume the responsibility for the operation of the city's equipment because they fear personal liability? It would seem that if, through human error in judgment, accident and injury does result, the city must pick up the tab if its employees are at fault, or else provide some form of financial protection for its apparatus operators. If the situation is not clear, then fire chiefs' and fire fighters' organizations should seek legislation to clarify the matter.

When a person is injured, or property is destroyed by a Federal Government-owned vehicle it takes an appropriation by Congress to make restitution. The government cannot be sued. However, it is said that Federal employees lack protection if they are negligent. This would apply for example, to U. S. mail trucks. However, these are not emergency vehicles. The driver is not operating under the immediate direction of a superior officer.

It would seem that fire officials should stress safe operation of fire department vehicles and discipline members for negligence, but that the city should always pick up the tab when accidents result from acts of its employees. This is necessary if fire fighters are to have the confidence needed to respond with alacrity ("a cheerful readiness" — Webster's) the next time the bell hits.

Cover Photo

Assistant Chief G. W. Quick and eight other members of the Kitchener, Ontario, Fire Department suffered smoke inhalation or injury when fire involved the Windsor Hotel in that city on February 29. It began in the basement of the 3-story brick, wood frame structure and gained considerable headway before it was discovered. A telephone alarm brought 3 companies of Chief K. R. Putnam's Kitchener Fire Department, including 6 pumpers, 2 ladder trucks, and a rescue unit. The Waterloo and Preston Fire Departments also responded as part of a prearranged mutual aid plan.

Contributing to fire spread were an open stairway, an elevator shaft, undivided attic space, and concealed spaces behind walls and above ceilings. Fire fighters had difficulty in directing hose streams effectively and loss was estimated at more than $260,000. (*Cover photo by Kitchener-Waterloo Record.*)

THOROUGHNESS

the essence of pre-fire planning

Conclusion of a series describing the pre-fire planning program of the Memphis, Tennessee, Fire Department, headed by Chief John C. Klinck. Preceding articles appeared in the January, February and March, 1956 issues of FIREMEN magazine.

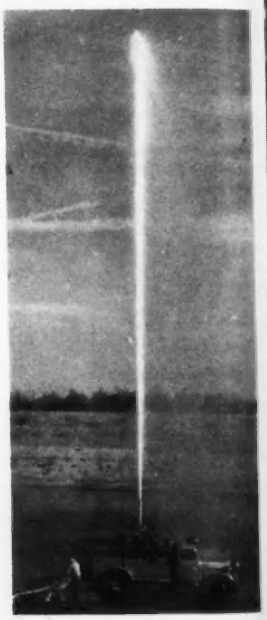
THE Memphis Fire Department makes extensive use of large caliber fog nozzles and other heavy stream appliances. Hence, in all pre-fire planning, special attention is given to proper placement of pumpers and appliances to take full advantage of available water supply. That is why the water supply maps, mentioned in the preceding issue of FIREMEN, are so essential to the "preplanning committee."

When the committee of chiefs decides, generally, what the placement of apparatus should be for a particular area, and approval has been given by Chief Klinck, water flow tests are made at the individual property. These tests do not consist merely of making flow readings from hydrants but layouts are made and pumps and nozzles are actually operated at the required pressures. This may indicate that the 1500 gpm pumpers will be needed at certain hydrants while the smaller 1000 gpm pumpers may give the desired flow and pressure at other points. Pumpers and deluge guns are placed in positions considered strategic for fire attack or protection of exposures so that the actual coverage provided by the streams will be observed and the hose layouts that will be needed can be made and checked. In some instances the sequence of layouts is important to permit some of the apparatus to lay hose in confined areas and connect to hydrants without obstructing other units.

Specific sizes and types of nozzles and tips are used on the guns to utilize water supply to capacity. Static and residual pressures of all hydrants are noted when

(Left) Flow test of "stream master" with J-200 fog nozzle on the grounds of the Southern Cotton Oil Company.

(Right) Test of High Pressure Truck No. 1, which is discharging through a 2½-in. tip on a deck gun. Water is being supplied by a 1500 gpm pumper.



(Left) The new "multi-master" was demonstrated in Memphis during the recent Fire Department Instructors' Conference. Here it directs a fog stream on a lumber fire.

MEMPHIS FIRE DEPARTMENT — TRAINING DIVISION

OPERATIONAL CONTROL

1st ALARM CO'S 3-5-9 Trucks 1-2 Fire Patrol-1 Rescue-1

2nd ALARM CO'S 1-2-4-7 Truck 5 Fire Patrol-2 Light Truck-1

3rd ALARM CO'S 6-8-11-12 Truck 6 Fire Patrol-3

Spl ALARM CO'S none

1st ALARM

PUMPERS
- 3 — 2 hand lines (fog) 2 lines into aerial with J-200
- 5 — 4 lines into JN-200 on deck gun, 2 lines into J-200
- 9 — 3 lines into JN-200 on deck gun, 2 hand lines (fog)

TRKS
- 1 — Covered front of bldg., raised aerial and ground ladders
- 2 — Covered rear of bldg., raised aerial and ground ladders

SALVAGE spread covers RESCUE engaged in rescue work

2nd ALARM

PUMPERS
- 1 — 2 lines into stream master (J-200 nozzle)
- 2 — 2 lines into stream master, 1-cellar pipe, 1-hand line
- 4 — laid out, did not use pumper
- 7 — 2 hand lines 1¾" tips, #4 took line off #7

Truck 5 — worked, did not use aerial

SALVAGE — used JN-200 on deck gun High Pressure

3rd ALARM

PUMPERS
- 6 — laid out, did not use pumper
- 8 — laid one line into stream master
- 11 — 4 lines into Fire Patrol #3, JN-200 nozzle
- 12 — laid out one line, did not pump

Truck 6 — worked, did not use aerial

SALVAGE — used deck gun, JN-200 OTHER Light Truck worked

Typical of the reports compiled by the Training Division is this "Operational Control" sheet. It was prepared after the Rex Hotel fire and describes the functions of each ladder and engine company, as well as other units which participated in the three-alarm response. Such reports of actual fireground work are helpful for revision of pre-planned assignments.

MEMPHIS FIRE DEPARTMENT

COMMUNICATIONS CONTROL - OPERATIONAL LOG SHEET

TIME ON 1:30 AM TIME OFF 5:30 AM

COMMUNICATIONS CONTROL CAR NO. 211 COMMUNICATIONS CHIEF Scott

RUNNER Captain Leach — ASSIGNED TO Chief Spruit

RUNNER Pvt. Adelman — " " Chief Klinck

WALKIE TALKIE (RUNNER) Pvt. Buchanan — " " Chief Scott

WALKIE TALKIE (RUNNER) Pvt. Howard — " " Control Car

ALARM 2 (3) 4 — SPECIAL ALARM X X X X X X X — LOCATION OF ALARM REX HOTEL - 194-198-200 UNION

PUMPER COMPANIES OPERATING AT FIRE

(1) (2) (3) (4) (5) (6) (7) (8) (9) 10 (11) (12) 13 14 15

16 17 18 19 20 21 22 23 24 25 EXTRA EXTRA

TRUCK COMPANIES OPERATING

(1) (2) 3 4 (5) (6) 7 8 9 10

SALVAGE-DELUGE (1) (2) (3) 4 — RESCUE SQUAD (1) 2 3 — WATER TOWER (1) 2 — LIGHT TRUCK (1) 2 3

CHIEFS OPERATING AT THE FIRE 211

(101) (102) (103) 104 (105) (106) (107) (108) 109 110 211 (214) (301) (66) 213

X X X X X X X X X X X X X X X

OFF SHIFT MEN AT STATION NO. Hdqrts. — CHIEF IN CHARGE OF OFF SHIFT Chief Hokman

PUMPER COMPANIES STILL IN SERVICE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

(16) (17) (18) (19) (20) (21) (22) (23) 24 (25) EXTRA EXTRA

TRUCK COMPANIES STILL IN SERVICE

1 2 (3) (4) 5 6 (7) (8) 9 10

OTHER COMPANIES STILL IN SERVICE - NONE

EXTRA COMPANIES PLACED IN SERVICE - NONE

Operational log sheet compiled in control car. Solid circles indicate fire companies and chiefs at the fire; broken circles show reserve apparatus.

severe demand is placed upon the water system. Through such observations, the preplanning committee is fully informed about the Department's attack potential for each area of the plant property.

In more than one instance, the Department has discovered that a "routine" placement of heavy stream equipment in practice, might have meant serious loss of attack potential during actual fire conditions, because of the demand which would have been placed on the water supply in that particular location. The water flow tests, therefore, are providing important information on how many effective hose streams and heavy stream appliances can be placed into operation for each area of the industrial site. It has led to the development of special apparatus for laying and supplying large lines and heavy streams. Where water supplies in the immediate vicinity of the plant in question are inadequate at present, the pre-assignment includes layouts from 1500 gpm pumpers supplying 3-inch hose from hydrants on large mains further away. These lines may be run to a large distributor truck called a "multi-master" from which heavy streams or hand lines may be supplied. (*Opposite page.*)

As a result of preplanning, pumper crews know whether they should use hand lines or operate deluge equipment for their particular positions. Pump operators know how much pressure to supply for the lines and appliances being used and whether the operation will be with pump in parallel or series.

Typical of the pre-fire planning assignments are these for Engine Companies Nos. 7 and 8, two of the four first alarm engine companies who respond to the huge Southern Cotton Oil Company property:

Engine Company No. 7: Connect to plug at South and Mansfield St. Do not lay to plant siamese connection unless ordered to do so. Locate fire and work to best advantage. In event of advanced fire, convert to deluge equipment. Use hose of Engine No. 11, if additional hose is needed. If 3rd alarm is called, all spare men of Company will assist Engine Company No. 22 in laying 4 lines from Severson Avenue to the company fence. (Where hose connections have been provided by the management on recommendation of the Fire Department.)

Engine Company No. 8: Connect to hydrant on Williams Avenue between plant siamese connections. Lay 2 lines into each siamese. Pump 100 pounds pressure and raise pressure to 150 pounds on orders. Assist Engine Company No. 7 after lines are connected to siamese.

Of course there is enough flexibility in assignments so that fire officers may use apparatus and equipment to best advantage and the first due engine is always left latitude to locate and attack the fire. In some situations pumpers may be moved into position but will not be needed for water supply. Ladder trucks also

CONTROL CAR RADIO LOG SHEET

LOCATION OF FIRE REX HOTEL - 200 Union DATE 10/23/54

TIME	RADIO FROM	NUMBER TO	
1:30 AM	213	871	Setting up communications
	213	871	Stand-by 213
	12	871	On the scene
	10SK	871	At Headquarters
	213	871	How many salvage trucks on the scene
	871	213	Three
	213	871	Want one Salvage at front and one in rear
	871	213	There is one Salvage in rear
	213	871	Have Light, Gas & Water can cut off gas
	871	213	Contact Gas man in rear of the building, a pumper is parked over the manhole
	SK	871	Have 6 lines laid into #3 Salvage
	9	871	Pumping 3 lines into deluge and 2 hand lines

Extract from control car's radio log sheet which was compiled during Rex Hotel fire.

may be spotted but there may be no need to raise the aerial and the truck men can be assigned to assist other companies. In a plant as large as the Southern Cotton Oil Company there are alarms of fire from time to time. The Editor of FIREMEN had opportunity to respond to one such fire with the Deputy Chief. On arrival the first due companies were going to work on a small fire in a processing building but other engine companies were connecting up to pump into the plant from the public mains in the event a working fire was encountered.

A good illustration of how assignments work out on the fireground may be found in the Department's report of a fire at the Rex Hotel. This building was a 2- and 3-story brick, wood joisted structure, with the first floor occupied by mercantile firms and the second and third floors serving as the hotel. Two open stairways extended from the first to the third floor, one at the front entrance and the other in the west rear of the building. An outside fire escape was on the west side near the front.

Fire started with a gas explosion in the basement and the night clerk turned in the first alarm at 1:19 a.m. Second alarm was at 1:22 and third alarm was at 1:26. First alarm response included three pumpers, two 100-ft. aerials, a rescue company, a salvage company, a deputy chief and a district chief. Second alarm brought four more engine companies, another 100-ft. aerial ladder, a salvage company and a lighting truck. Chief Klinck also responded on this alarm. Shortly after his arrival a third alarm brought four pumpers, an aerial ladder, salvage truck, and a water tower. At the same time the off duty shift was recalled and 191 men responded; 53 going to the fire and the rest putting reserve apparatus into service.

Ten hotel guests were rescued by fire fighters who wore self-contained masks. Three were rescued by means of aerial and extension ladders.

After a number of extremely violent gas explosions in the basement, fire fighters and public utility personnel reached the gas cut-off valve at the rear of the building and shut off the supply, but large stocks of paper and dry goods in the basement were heavily involved. Large caliber fog streams were directed into the first floor to prevent upward extension as it was impossible to remain directly over the fire at this time. Special large cellar nozzles each supplying two 700 gpm adjustable fog nozzles were directed into the basement. These nozzles so filled the cellar with fog that fire damage was confined to the basement and a small portion of the first floor. Two deck guns with fog tips were also used to establish control as the fire extended into the first floor. Altogether twenty-seven 2½-in. lines were laid to supply both fog and straight stream nozzles. Control was gained by 2:45 a.m.

Such fire fighting operations, which require the frequent use of heavy stream equipment, demand some form of pre-fire planning. The Memphis program has done much to eliminate "guesswork" on the fireground.

It is assuring that any future multiple alarm fires will be handled with the best response and use of equipment which the Department can contribute.

Memphis fire fighters direct stream from 2½-in. line into doorway of Rex Hotel. Large caliber fog nozzles were used effectively to halt extension of fire.

Philadelphia Presentation

Grand Award for the winning U. S. municipal entry in the 1955 NFPA Fire Prevention Week Contest went to Philadelphia, Pennsylvania. (See February, 1956, FIREMEN.) On February 9, NFPA General Manager Percy Bugbee presented the award to the Philadelphia Fire Department. Shown at the presentation are NFPA President T. Seddon Duke, Mr. Bugbee, Philadelphia's Fire Commissioner Frank L. McNamee and Deputy Commissioner George E. Hink.

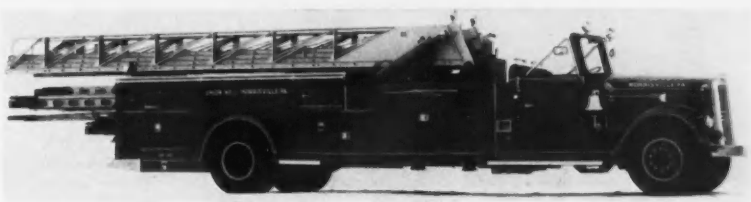
TROUBLE CHART FOR MOTION PICTURE PROJECTORS

This table identifies with (X) the probable causes (listed below) that should be investigated when the trouble symptoms (at right) appear. When the projectionist is not qualified to make the necessary repairs, the nearest service agency of the manufacturer should be consulted.

	probable causes of trouble	trouble symptoms: No sound	Impaired sound	No picture	Poor picture	Hum or other noises	Irregular motor	Picture and sound not synchronized	Loss of film loops
1	Low line voltage		X		X	X	X		
2	High line voltage					X	X		
3	Speaker improperly or not connected	X	X			X			
4	Amplifier not on	X							
5	Amplifier tubes defective	X	X			X			
6	Exciter lamp defective	X	X			X			
7	Photo electric cell defective	X	X			X			
8	Projector lamp burned out			X					
9	Projector lamp out of alignment				X				
10	Lens incorrectly focused				X				
11	Film incorrectly threaded	X	X		X	X		X	X
12	Volume control not on or defective	X	X			X			
13	Fuse burned out	X							
14	Projector cable broken or loose	X	X			X	X		
15	Defective motor belts		X		X				
16	Poor acoustics		X						
17	Dirty sound lens	X	X			X			
18	Dirty projection lens and reflectors				X				
19	Speed control at wrong position		X		X				
20	Film channels dirty	X	X		X				
21	Lack of or too much oil		X			X	X		
22	Motor governor brushes dirty or damaged		X			X	X		
23	Motor commutator dirty or damaged		X			X	X		
24	Poor contact in line cord	X	X	X	X		X		
25	Poor screen or extraneous light				X				
26	Defective or dirty film		X		X				X
27	Line polarity or plugs switched	X	X			X			
28	Film gate pressure shoe not seating properly		X		X				X
29	Faulty switch	X		X					

For Motion Pictures

The chart above is reprinted from the February issue of "Siren," a publication of the New York State Bureau of Fire Mobilization and Control. Readers who utilize motion pictures for fire department training might find it practical to keep this chart within the projector container. It could help you effect quick repair if the projector fails for some reason during a training session.



New Aerial Ladder

Ward LaFrance Truck Corporation, Elmira, New York, is manufacturing a new steel aerial ladder truck as a 4-wheel drive or a tractor-drawn model. It features a 250 horsepower engine, telescopic ladder sections, generous compartment space for equipment, a complement of ground ladders, and other standard equipment. The ladder has rubber covered rungs and a specially-designed handrail. It is available in 65-, 75-, and 85-ft. lengths.

Flammable Liquids Notebook

How should fire departments fight fires involving tanks of flammable liquids? What are the dangers of fighting such fires? What signs should fire fighters watch for to assure their own safety in attack? These questions and others, commonly asked at fire schools, are answered in this article by Miles E. Woodworth, NFPA Flammable Liquids Engineer.

ACCORDING to NFPA Standard No. 30-L — "Suggested Ordinance for the Storage, Handling and Use of Flammable Liquids," a bulk plant is that portion of a property where flammable liquids are received by tank vessel, pipe lines, tank car or tank vehicle, and are stored and blended in bulk for subsequent distribution. (Bulk plants should be distinguished from refineries, which are plants where flammable liquids are produced on a commercial scale from crude petroleum, natural gasoline, or other hydrocarbon sources.)

Fires in flammable liquids tanks at bulk plants are rare, particularly if the installations comply with NFPA standards and the tanks are well maintained. (See February, 1956, FIREMEN.) However, there are important characteristics of such fires which every fire fighter should consider.

Any fire department which responds to fight fire at a bulk plant should immediately contact the plant manager. It is imperative that the fire department work closely with this man, who has at his fingertips information concerning the construction details, piping arrangements, class of flammable liquids in the various tanks, drain locations and availability of special extinguishing agents. Working with the plant manager will assure not only more effective fire fighting but also may protect the lives of the firemen. Such a cooperative program should be developed as a part of pre-fire planning.

Since the majority of tank fires originate with an explosion, it can be anticipated that the roof of an involved tank will be blown off completely or be ruptured from the shell. Most of these fires occur in Class I or II flammable liquids tanks and the only accepted method of extinguishment is the use of foam in quantities and rates recommended in NFPA No. 11 — "Standards for Foam Extinguishing Systems." (Available from NFPA Executive Office for 50 cents per copy — Ed.)

If foam is not available for extinguishment, the tank contents will burn and the steel shell will weaken about a foot or two above the liquid level, then will continue to fold into the tank as the liquid level goes down. Gasoline, for example, will burn at an approximate rate of 12 to 18 inches per hour, and a tank shell holding this burning fuel will weaken and fold inwards.

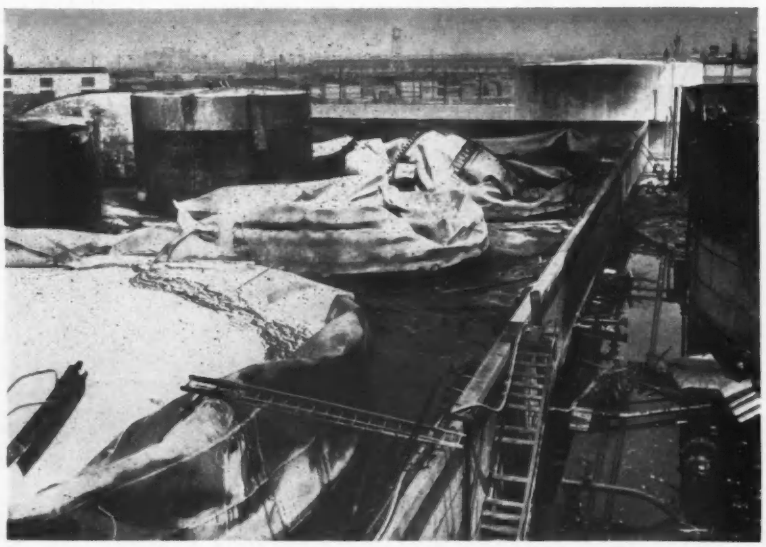
Any ground fire should be extinguished as quickly as possible and exposed tanks should be kept cool by applying water to the roofs and shells. Water applied to the top of a cone roofed tank will flow over the roof and shell. The desired rate of application is one-tenth of a gallon per square foot of tank surface.

When fighting ground fires it is important not to spread the fire on the surface of the water which accumulates. Permitting such fire spread may seriously expose other tanks, particularly the piping. Drains for diked areas should be used fully to drain off excess water, but flammable liquids should not be permitted to enter such drains.

Apply water to the roofs of all types of tanks, except floating roof tanks. Too much water can sink a floating roof, so hose streams should be applied only against the shell of an exposed floating roof tank.

Fires in such tanks are the easiest of all tank fires to extinguish, since they burn around the seal between the roof and shell and may be extinguished by using dry powder, CO_2 or foam extinguishers. Foam, or high pressure fog hand lines may also be worked around the tank from two directions to pinch out the fire. Cooling water can be applied to the outside of the shell to prevent distortion.

A fire that is burning at a tank vent with a yellow-orange flame emitting black smoke indicates a



Fire at the marine terminal in San Pedro, California, resulted in the collapse of these tanks, which folded inwards when fire spread on the oil floating on the water. (See FIREMEN for September, 1954.)

View of collapsed tanks which resulted in the Standard Oil Company (Indiana) refinery fire last year. Vee Jay Photo. (See FIREMEN for October, 1954, and preprint from the October, 1954, NFPA *Quarterly*.)

vapor-rich condition, within the tank, which is above the flammable or explosive limits. This type of fire can be extinguished by smothering with steam, dry powder, CO_2 or wet blankets. There is no danger of an explosion.

Fire at a tank vent that burns with a snapping blue-red, nearly smokeless flame, indicates a vapor-air mixture within the tank that may be explosive. There is constant danger of an explosion should the flame reach the inside of the tank. The best attack procedure, therefore, is to maintain a "positive pressure" within the tank by pumping liquid into it. When a vapor-rich condition is indicated by change in the flame character to a smoky yellow-orange flame, danger of explosion has passed. Extinguishment can then be accomplished as stated in the previous paragraph.

Never apply cooling water to tanks burning with a snapping blue-red, nearly smokeless flame at the vent. Nor should such tanks be pumped out. Several of the tank vent fires reported to the NFPA featured injury to firemen when water applied to cool the tank shell caused an explosion.

Flammable liquids which develop heat waves, such as crude oil, will result in violent boil-overs when the heat wave reaches the water, or heavy water-entrained oil, at the bottom of the tank. Heat waves travel downward at fifteen to fifty inches per hour. Progress of the heat wave may be followed by observing a vertical stripe of heat detecting paint on the tank shell, or by watching a water stream applied to the shell. The beginning of a boil-over is indicated usually by an increase in height and brightness of the flames. Since it is quite unlikely that dikes will confine boil-overs, it will be necessary to evacuate everyone from the area when the heat wave has reached a point five feet above the known bottom water level. Be on guard against successive boil-overs from a burning crude oil tank as they often occur. (See August, 1955, FIREMEN.)

Fires involving leaks from valves or pipe lines, or in portions of tanks below liquid level, may be easily extinguished by pumping water into the lines to the tank to cut off the supply of fuel to the fire.

Horizontal tanks present a slightly different problem, although the basic steps for using cooling water apply, together with the same warnings for vent fires. Extinguish the ground fire with water fog, foam, CO_2 or dry chemical and keep the exposed tanks cool. If the tank supports are not fire-resistive, or protected, or if the tank vents are inadequate, special attention should be given to the application of cooling water streams and for the safety of the firemen.

Although spectacular, flammable liquids tank fires are safe to fight, in comparison with most building fires. This is particularly true when all features of the tank, valves, piping and other incidental installation requirements meet NFPA standards (NFPA No. 30-L).

These fire fighting procedures are basic features applying to fighting fires in the normal petroleum liquids such as gasoline and fuel oil. Certain reactive or unstable flammable liquids may require additional precautions for the fire fighter.

NFPA No. 30-L — Suggested Ordinance for the Storage, Handling and Use of Flammable Liquids
56 pages, 50 cents per copy
NFPA No. 11 — Standards for Foam Extinguishing Systems
60 pages, 50 cents per copy
Write to:
NATIONAL FIRE PROTECTION ASSOCIATION
60 Batterymarch Street, Boston 10, Massachusetts

COMMAND DECISIONS!

By Warren Y. Kimball, Manager, NFPA Fire Services Department and Editor of FIREMEN.

(Part II of two parts.)

ONE of the most important and frequently overlooked command responsibilities that should be assigned at major fires is designation of a chief whose specific job will be to see that engines are properly placed and supplied. He will see that sufficient lines at adequate pressures are connected to heavy stream devices, that ladder pipes are placed in operation and effectively supplied, that too many lines are not connected to pumpers on small mains, making existing streams ineffective, and that the best possible use is made of available water supplies with the cooperation of water department personnel. In many departments this has traditionally been the duty of the supervisor of apparatus or engines. While other chiefs direct the placing and operation of companies at the fire, this officer and his assistants make certain that pumps and water supplies are used in the most effective manner.

Unfortunately today, the fast mobilization of pumpers makes this problem more critical than ever before. Many departments fail to make this a definite command function and then complain because there are so many poor streams on the fireground. For example, a pumper is putting the full capacity available from its hydrant into a gun or ladder pipe, when, without reference to the pump gages or tachometer, a hand line is run from the same pump, resulting in two poor streams instead of one good one. At the same time another pump with a good hydrant residual pressure is supplying only one line.

Or, two lines are supplying a gun or ladder pipe which is providing a fairly good stream. Additional companies arrive and connect pumpers to the same mains and run lines to the same point of operation. None of the streams can be classified as good. Eventually the chiefs shut down several lines to get within the capacity of the water distribution system in the fire area.

A chief responsible for water supply might make existing heavy streams more effective, in both volume and reach, by running the additional lines into the heavy stream devices already in operation, or he may assign pumps to relay where long lines are resulting in excessive friction losses. Either method would reduce friction loss and make the most of the available supply. Where additional positions must be covered with hose streams he might indicate the use of smaller tips. Experience shows that the full available pumping capacity and water supply is seldom used even at major fires because the chiefs in command often cannot handle all of these details simultaneously without delegating command authority. Some fire departments use the chief training officer for some of this fireground command duty. Such responsibility gives him an opportunity to observe where emphasis should be placed to make the training program meet the practical needs of the department.

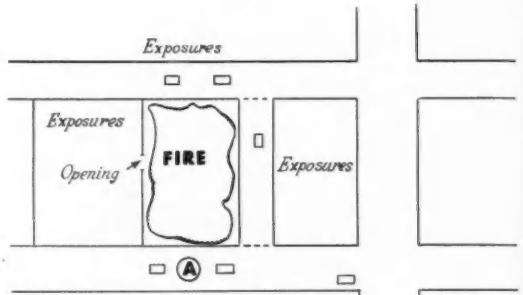


Fig. 1

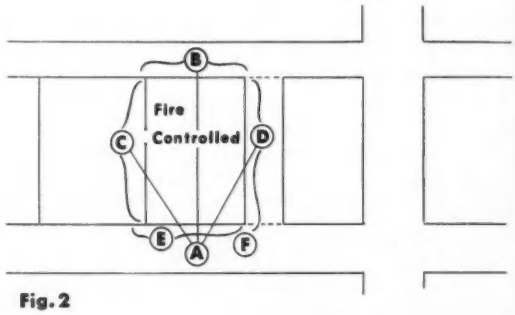


Fig. 2

The chief fire prevention officer also may be used for certain fireground command responsibilities and this is one reason why such an officer should possess adequate rank and have considerable fireground experience. He is expected to know much about structural conditions, about special hazards and processes, and also about special private fire protection equipment. He will be especially concerned with the investigation of the cause of the fire and preservation of evidence if the fire is of suspicious origin. He will see that the chief of department is advised regarding any special or peculiar conditions that may prevail.

IT IS not within the scope of this paper to go into the matter of assigning individual companies to various positions or to discuss various methods of attack with which fire chiefs may be concerned. We are merely discussing the assignment of chief officers. Accordingly, we include two simple diagrams of a typical fire building which might be any building in your community in which a working fire may occur. Figure 1 shows the fire area with an alley at the rear and an open area at

the right, both of which present severe exposures. At the left is a party wall with unprotected openings. In addition the extension of fire on several floors must be controlled. We show as (A) the chief in charge of the fire. Other chief officers, if available, have not received specific command assignments. The chief in command can only guess at what is taking place at various points simultaneously. He can only hope that companies take the proper hydrants and make effective hookups and layouts.

In Figure 2 we show the command responsibility effectively delegated. The second in command (B) has been given charge of the protection of exposures and attack at the rear. Another ranking officer (C) sees that the fire does not extend to adjoining structures. Another chief (D), if available, directs the attack from the other side. Other chiefs, as described in the text, assist the chief of department in placing apparatus and heavy streams, in directing the attack inside the building and in handling special conditions. All report to and are coordinated by the one man in command of the fire so that a uniform plan of operation is executed and the chief of department will have the information necessary in making his decisions.

As soon as the fire is under control so that it can be handled by one or two chief officers, control is handed back to the division or platoon chief. It will be his duty to dismiss companies and set up the required details to man the watch lines. Remember, that as long as lines are on the property it is still under the control of the fire department. This may be important particularly where an investigation is under way and where the department wishes to control access to the property. Also, "watch" lines reduce the danger of a serious rekindle due to the drying out of hot carbonized material that may cause reignition several hours after the fire appears to be out.

As previously mentioned, an old practice handed down from horse-drawn days was to relieve the last arriving companies first, thus making the first due engine the last to leave the fire. This practice is now outmoded in many progressive departments. As pointed out, fresh crews can readily be brought in and the tired men given an opportunity to change their clothes and clean up. As companies will have been moved as needed to cover all areas it will make no particular difference to the protection of the city which companies return first. However, the protection of the entire city (including simultaneous fires) should be the responsibility of the chief of department. He should avoid being tied down by details which subordinates are capable of handling. It is also the duty of the division chief, and possibly the district chief, to prepare a detailed operational report on the fire which will be the basis for discussion at staff conferences and the basis for recommendations to the training, maintenance, fire prevention, communications and fire fighting divisions of the department.

The practices we have been discussing are by no means new ideas. They have been developed over many years of experience by wise chiefs of fire departments who have been forced to find workable command procedures. One fire chief whom we admire has summed up the successful command program for fire fighting in three words: "Organize, deputize, supervise."

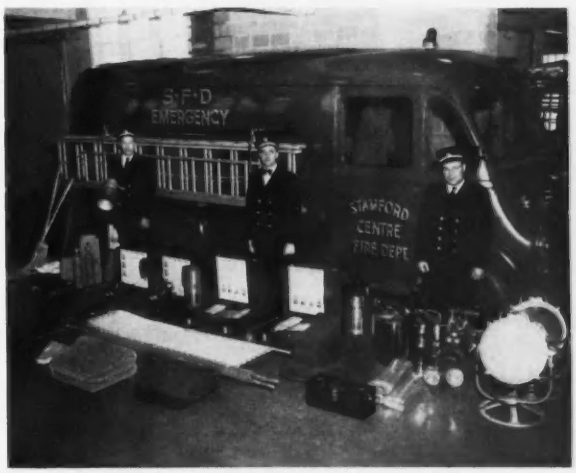
Modernization for Volunteers

H. B. SHAVALIER, Secretary of the Stamford, Ontario, Volunteer Firemen's Association, reports the completion of a new fire station for Stamford Centre, which is located just north of Niagara Falls. The new building is 38 by 72 feet in size, two stories high, and, with renovations of the old fire station, represents an investment of $50,000 for modernization of fire station facilities.

The new building (shown above) and property are owned by the Association, which operates under a Provincial Charter as a "company without share capital." Funds are derived from annual carnivals and contributions. The volunteers completed much of the interior finishing of the building, with an estimated saving of $5,000. The station features an apparatus room, showers, washroom, recreation room and kitchen. A hose dryer is used, since space is limited, and the volunteers report good results with this equipment.

Apparatus includes a 1938 Buffalo 600 (Imperial) gpm triple combination pumper; a 1951 Bickle-Seagrave 500 (Imp.) gpm pumper on an International chassis, with an 800 (Imp.) gallon booster tank; and a 1955 International truck with a "Metro-type" body. Volunteers of the Association rebuilt the interior of this vehicle so that it could serve as a disaster unit.

Secretary Shavalier also states that all fire fighters who visit Niagara Falls (including honeymooners) are invited to inspect the new building and equipment of the Stamford Volunteer Firemen's Association.



Stamford volunteers with the "disaster unit" which they rebuilt. (Photo by Jimmy Simpson, St. Catharines, Ontario.)

"Spelling Out" Fireground Procedure

(Part I of two parts)

IN FIRE attack, fundamentals can mean the difference between success and failure. Buildings have been lost because pumpers and ladders were spotted incorrectly, because someone neglected to pump into the fire department connection on the sprinkler system, or because there were conflicting orders from fire officers.

Preplanning of fire situations (see pages 12–14) will eliminate much confusion on the fireground. So will the proper delegation of command responsibilities, as discussed on pages 18 and 19. However, when general operational plans have been developed, it is practical to "spell out" the details in writing, either in a departmental general order, or in the manuals and lessons used in fire department training sessions.

Too often, tradition has been the instructor in some fire departments, that is, fire officers follow procedures which may have developed haphazardly through the decades. As a result, details may be overlooked in the haste of fireground action, or there may be confusion of command or position assignments.

A written, easy-to-understand description of what individual fire companies should do, and an outline of the responsibilities of fire officers, can do much to develop smooth coordination in the fire attack. Companies automatically will assume the positions which can be most effective for fire attack, and officers will realize more clearly what will be expected of each operating group on the fireground.

To show how such information may be prepared, FIREMEN presents on these pages portions of the general orders of one large fire department. This is not suggested as a model but is merely shown as an example of local procedure in one city.

1. Assignment of Positions for First-Arriving Engine Companies

Unless otherwise ordered by the officer in charge at a fire, (as specified by Rule 187 (a) of the rules and regulations of the Department) the first-arriving engine company at a fire in a building is hereby designated as the engine company assigned to operate at the front of the fire. This will normally be the front of the building, unless the main body of the fire is located at, or is obviously threatening exposures at any other part of the building, in which event the officer in charge at the fire shall designate such area as the fire front or front of the fire building. The foregoing shall also apply to fires in large open areas such as lumber yards, barrel and box storage, open wharves or piers, or any other fire involving large quantities of combustible materials.

Normally, it shall be the duty of the first-arriving engine company to advance lines of hose by way of the front doorway, when the same is accessible, to attack the fire and prevent vertical or lateral extension. When ordinary means of access to a building are not available, access shall be gained by the use of ladders or any other means at hand. When a fire is in a cellar or basement, the first-arriving engine company shall, when possible, advance a line or lines to the basement or cellar and extinguish the fire under the direction of the officer in charge. If the fire is extending vertically and threatening to involve the first or other floors of the building, all necessary action shall be taken to hold the fire in check until the arrival of additional help.

2. Single Unit Engine Companies

Rule 187 (d) shall be amended by adding the following:

"Single unit engine companies, on arrival at a fire on a still or box alarm, shall employ the basic principles of single unit operation in controlling and extinguishing the fire. The pumper shall stretch a feeder line from the nearest available hydrant in accordance with prescribed instructions, and one or more preconnected 1½-in. lines shall be stretched for operation on the fire or for covering exposures. When it is obvious from the nature and extent of the fire that it would be impracticable to use 1½-in. lines on the fire, 2½-in. or larger lines shall be used. When 1½-in. lines are stretched at a fire, the officer in charge shall take the necessary precautions to back them up with 2½-in. lines in accordance with recognized departmental policy.

Normally, a single unit pumper supplied by one 3-in. feeder line can supply water to two 1½-in. attack lines and one 2½-in. hand line. If an additional line is going to be stretched from this unit, the company stretching the additional line shall stretch a second feeder line from an available hydrant or pumper to augment the supply of water to the unit."

3. Two-Piece Engine Companies

When a two-piece company is the first engine company to arrive at a fire, the procedure shall be as prescribed in current rules of the department which require that the pumper be connected to a hydrant, and a line or lines be stretched to the fire. When a booster line is stretched for the initial attack on a fire, it shall be backed up with a larger line in accordance with departmental policy.

4. Assignment of Second-Arriving Engine Company

Unless otherwise ordered by the officer in charge at a fire, the second-arriving engine company on a box alarm is hereby designated as the engine company to operate at the rear of the fire. It shall be the duty of this company to stretch the necessary line or lines to attack the fire in the rear and prevent its extension by operating on the fire or by covering exposures. Companies operating at the rear shall exercise extreme diligence to prevent extension of the fire and to control and extinguish it.

If the second-arriving engine company is a two-piece company, the pumper shall connect up in accordance with the rules of the department, and the wagon shall stretch a line or lines as close to the fire as is practicable and the company shall operate at the rear of the fire as heretofore stated. If the second-arriving engine company is a single unit company, it shall operate in accordance with the prescribed instructions unless otherwise ordered by the officer in command at the fire.

5. Fires in Sprinklered Buildings

Rule 187 (e) shall be deleted and the following substituted:

"The second-arriving engine company at a fire in a sprinklered building, unless otherwise ordered by the officer in command at the fire, shall stretch a 2½-in. line from the nearest available pumper, or high pressure hydrant, to the siamese connection of the sprinkler system. However, if, in the opinion of the officer in command at the fire, the fire can be attacked more successfully or can be controlled more readily by use of the sprinkler

system on the initial attack, he shall order the first or any subsequent arriving engine company or companies to stretch 2½-in. or 3-in. lines into the siamese connection of the system, to augment the supply or increase the pressure in the system. If a line is stretched from a single unit pumper into a sprinkler system, a second feeder line shall be stretched to the intake or suction side of the pumper."

6. Placing of Wagons and Pumpers at Fires

Officers and drivers of engine companies shall not stop or leave pumpers or wagons at or near a fire building or fire area, so as to prevent the raising of aerial or other ladders or to interfere with other operations. Pumpers and wagons not in use at a fire shall be driven to the side of the street and parked so that they will not interfere with the movement of apparatus, street cars, buses or other vehicles. Such apparatus shall not be driven from the fire area, as this prevents the use of hose, ladders or equipment by other companies.

7. Use of Soft Suction Hose

Rule 187 (f) shall be amended by deleting the last sentence and adding the following:

"Soft suctions shall not be used by engine companies responding to multiple alarm fires. However, if, in the opinion of the officer in command at a multiple alarm fire, the fire can be attacked or controlled more efficiently by use of single unit operation by designated companies, he may order such companies to connect to hydrants in the prescribed manner and stretch a feeder line in accordance with previous instructions; or, if in his opinion, the gun mounted on the pumper of a single unit engine company can be put into operation more expeditiously by using feeder lines to the pumper, he shall order the stretching of such feeder lines. In no case shall less than two feeder lines be used in supplying guns, and, where possible, such feeder lines shall be stretched simultaneously by the pumper."

8. Assignment of Position for First-Arriving Ladder Company

The first ladder company to arrive on a still or box alarm for a fire in a building shall operate at the front of the fire building, unless otherwise ordered by the officer in command at the fire. The ladder company officer shall be responsible for correctly spotting the truck so that the aerial ladder, if needed, can be raised and placed in position for rescue work, ventilation or other fire fighting operations. When the aerial ladder is not needed, the truck shall be so located that ladders and other equipment are readily available. Ladders shall be raised immediately if life or limb be in jeopardy or when ladders are needed for stretching of lines, ventilation or other fire fighting operations.

On each tour of duty, the officer in charge of each ladder company shall assign one or more members for opening up purposes, (forcible entry) and at least one member who shall go to the roof or other suitable location by way of the aerial or other ladder or by any other accessible means and proceed to initiate ventilation above the fire. The member assigned for this purpose shall carry an axe and such other tools as are necessary and shall start ventilation where heat and smoke indicate the immediate need for such ventilation. If ventilation is to start at the roof, openings over stair, elevator and other shafts shall be made and if necessary, holes shall be cut in the roof. Windows shall be opened as required. Members shall refrain from breaking glass except in emergencies or where windows cannot be opened.

It shall be the responsibility of the officer of the first ladder company arriving at a fire to use every means at his command to properly ladder the fire building, to perform necessary rescue or other work to prevent the loss of life or injury to occupants or fire fighters, to properly and effectively ventilate the fire building or section of the building, to open up and provide every means of access for the stretching of lines or for other fire fighting operations. When time and conditions permit, axe, rake, overhauling and such other duties as are required to control and extinguish the fire shall be performed.

9. Assignment of Position for Second-Arriving Ladder Company

The officer of the second-arriving ladder company, on arrival on the fireground, shall stop his truck at a point from which it can take any position designated and report to the officer in command at the fire and be governed by his orders.

In the absence of orders to the contrary, the second-arriving ladder company shall take the rear of the building and assist the first-arriving truck company in laddering the building, rescuing or directing occupants from the building, opening up for engine companies, ventilating and performing such other duties as are required.

10. Use of Masks at Fires and Other Emergencies

On each tour of duty, the officer in charge of every engine, engine squad, and ladder company shall assign two men who shall, upon arrival at a working or multiple alarm fire or at any other emergency where the use of masks is necessary, don the "Chemox" breathing apparatus assigned to the company. It shall be the duty of the men so protected to take over and advance lines of hose and perform rescue or other duties as may be required. "All-Service" filter type masks may be worn for ordinary fire-fighting purposes above grade, but when it is necessary to advance lines for operation below grade, or when members of the department are called upon to make rescues in manholes, deep excavations or in tanks which have contained inflammable or other questionable liquids the "All-Service" mask *shall not* be worn.

It shall be the responsibility of the officer in command of a company to assure himself that all members are equipped with self-generating or self-contained oxygen breathing masks when duties requiring such equipment are being performed. All masks and breathing apparatus shall be inspected weekly to ascertain that they are in proper and safe working order.

11. Electric Operating Equipment

The driver of apparatus equipped with electric generating equipment shall be responsible for the care and condition of such equipment. He shall examine and test the batteries in accordance with the provisions of Rule 143. He shall start the generator at 8:30 a.m. daily and he shall run the generator for two minutes. A notation shall be made in the company journal regarding such tests and inspections. The fire fighter assigned to operate an electric generator shall, upon arrival at a fire, report to the officer in command or to the Assistant Fire Chief (Division) and inform him of the availability of the generator for use of lights, power tools, smoke blower fans, etc., and when ordered, shall get such equipment ready for service as quickly as possible.

12. Fireground Duties of District Fire Chiefs

District Fire Chiefs are charged with the responsibility that fire companies in their districts understand and follow the proper procedure for fire fighting and that orders relating to same are observed on the fireground. Where variations occur, the District Chief shall ascertain the reasons therfore and note same on his fire report. He shall note ventilation activities and any difficulties connected therewith.

When a District Chief is in charge at a fire, he is expected to see that smoke blower fans, when available, are utilized to maximum advantage, where there is any smoke condition that may impede fire-fighting operations or increase property damage. On arrival of a superior officer at a fire, the District Chief shall report to him, and unless otherwise ordered, shall direct the operations of companies working inside the fire building.

13. Fireground Duties of Deputy Fire Chiefs

The Deputy Fire Chief shall be in command of the fireground until the arrival of a superior officer, to whom he shall report the existing conditions and the action taken. Unless otherwise ordered, the Deputy Fire Chief shall take command at the rear of all multiple alarm fires in his division. He shall make certain that all exposures are covered and shall coordinate the attack at the rear with the overall operations. As soon as possible, he shall inform the officer in command at the fire of the conditions and give him an estimate of the companies and other equipment needed to cover the assigned positions. He shall keep the officer in command informed of changing conditions and possibilities and shall request such additional companies or equipment as may be required for anticipated extension of the fire or to cover additional exposures.

After a multiple alarm fire is under control, the overall command shall revert to the Deputy Fire Chief of the division. It shall be his duty to relieve companies as soon as is practicable, and if not already ordered by the officer in command at the fire, it shall be his duty to arrange for and establish necessary fire details. As soon as conditions permit, he shall order the all-out signal sounded and turn the command over to the District Fire Chief.

New Disaster Truck for Red Cross

By Chandler J. Blackington, Sub-Committee Chairman of Public Information, Red Cross Disaster Service, Boston, Massachusetts. Photos by the author.

NOW in service for the Boston Chapter of the American Red Cross is the well-equipped disaster truck shown on this page. It responds to all 3-alarm or greater fires and disaster incidents in the area. Its first official run was on December 22, 1955, and it appears to be particularly useful in support of fire department operations.

Well over a year ago the Red Cross Executive Committee directed the Disaster Service Chairman to replace the old disaster truck with a unit custom fitted to the needs of disaster relief activity. Red Cross personnel then conferred with the NFPA Staff and with officers of the Boston Fire Department.

The consensus of opinion was that such a vehicle should at least be capable of the performance expected of fire apparatus. Hence, recommendations of NFPA Standard No. 19 — "Specifications for Motor Fire Apparatus" were used as a basis for specifying performance and certain equipment. Suggestions of Red Cross personnel who had participated in disaster emergencies were also applied to the specifications for the vehicle.

The disaster truck was constructed by the Gerstenslager Company of Wooster, Ohio. The body is of the closed van type, mounted on a heavy duty Ford 750 "Big Job" chassis, and is so designed that it may be removed from the chassis if future chassis replacement is needed. The truck has a wheelbase of 175 inches, a length of 26 feet, a height of ten feet and a gross vehicle weight of 9½ tons. Paneled sides of the unit are composed of individual, lighted compartments suitably arranged to carry stretchers, cots, floodlights, blankets, emergency tools and generators. These items are carried in exterior compartments and are easily accessible because of the large curved swivel handles, which are flush with the compartment frames.

Interior compartments hold first aid equipment, cooking and serving utensils, radios, registration forms and clothing for the crew and disaster victims. All compartments have been designed and placed to serve according to their frequency of use and general availability.

The disaster truck is painted white, has appropriate Red Cross insignia of Scotchlite material and suitable protective running lights. Four stationary red blinking lights are mounted front and rear, in addition to four adjustable white spotlights. A combination siren and oscillating red light is mounted high in the front of the truck for maximum attention. The chassis is equipped with power steering, power brakes, and a 100 amp alternator to provide sufficient power to operate interior lights, radios and other electrical needs.

A built-in 3500 watt self-starting generator can be activated from the cab of the unit, providing immediate auxiliary power for the needs of the truck as well as feeding weather-protected outlets from which seven floodlights may be operated. This generator will provide enough power to operate an oil burner, maintain minimum lights for a shelter, service an iron lung or run power tools used for emergency work. A smaller portable generator of 1000 watt output is also carried on the truck.

Careful attention was given to the planning of food service operations that are such a vital part of Red Cross disaster services. A folding service shelf opens from the left side of the unit at a convenient height for those standing on the outside of the vehicle. Four 5-gallon insulated liquid containers are arranged on the inside within easy reach of the volunteer who serves from a special seat, complete with a wide vision window and heated foot pad. A short distance from the serving area, there is a built-in LP gas stove that will heat food or liquids in short order. Large overhead compartments stock cookies, spoons and cups, and a central spotlight gives brilliant illumination to the food service area.

Because communications play such an important role at a disaster scene, the new truck is well equipped with radio. A three-way Motorola FM set is located in the cab operating on the American Red Cross frequency. This radio links the truck with the Chapter House and other mobile radio equipped Red Cross disaster units. Used in conjunction with this set are two "walkie-talkie" portable units that have a range of

(*Continued on page 26*)

Two views of new disaster truck. Left side of unit has a service shelf which unfolds at a convenient height for those standing outside the vehicle. Compartments on right side of vehicle are individually lighted.

1059 ITEMS from a SINGLE SOURCE!

Fyr-Fyter offers you the most complete line of quality fire extinguishers and fire department equipment in the industry!

Fyr-Fyter is the largest single source for Underwriters' approved portable fire extinguishers, fire hose, nozzles, couplings and other brass goods, pumps, clothing, ladders, warning and signaling devices, first aid kits, masks and breathing apparatus! Select from a practically limitless list of extinguishers and equipment that meet all the needs of *municipal, industrial* and *commercial fire departments.*

All of these products are available through Fyr-Fyter sales and service representatives . . . the largest sales force in the industry! They are fire protection specialists with knowledge, experience and training to offer counsel and make recommendations on specific problems. They represent a company that has enjoyed a nationally respected reputation for quality products since 1916.

YOU TALK TO ONE SALESMAN . . .
PLACE ONE ORDER . . . PAY ONE BILL!

TEAR OUT THIS COUPON AND MAIL WITH YOUR LETTERHEAD TODAY!

☐ Send your 40-page Fyr-Fyter Extinguisher Buyer's Guide.
☐ Send your 60-page Fyr-Fyter Accessory Products Catalog.
☐ Send your 16-page Fyr-Fyter Interior Fire Fighting Equipment Catalog.

FF-8

The Fyr-Fyter (FIRE) (FIGHTER) Co.

221 CRANE STREET, DAYTON 1, OHIO

REPRESENTATIVES IN PRINCIPAL CITIES

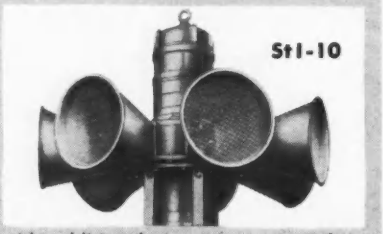
OUR 40th YEAR OF MANUFACTURING . . . THE MOST COMPLETE LINE IN INDUSTRY

BRANCH OFFICES: NEW YORK, BOSTON, PHILADELPHIA, CHICAGO, ATLANTA, DALLAS, SAN FRANCISCO, PORTLAND, SEATTLE

How's your HEARING?

Don't think that you're going deaf because your siren doesn't sound as loud as it used to! Don't think your siren is getting weaker because it is older.

If your siren **doesn't** seem as loud or **doesn't** cover the area it did in the years gone by, chances are it's neither your **ears** nor the **siren**. Despite its age, your siren is probably kicking out as much sound as it ever did; but natural and man-made obstructions have been reducing its sound distribution, trees and other vegetation have increased in size and quantity; more and larger buildings have been erected and the limits of your town have spread out considerably. Your one siren — once adequate — is attempting a task beyond its capacity! It can't do the job single-handed. Give it assistance



with additional sirens in congested or outlying areas. Replacement alone won't solve your problem. To do today's job with one siren requires many times more power — a super siren such as the FEDERAL Thunderbolt. Write for catalog 200.

FEDERAL SIGN and SIGNAL Corporation

8717 S. State Street, Chicago 19, Illinois

GET TO THEM IN A HURRY WITH . . .

HALLIGAN TOOLS

DEVELOPED FOR FIRE GROUND ACTION BY A FIRE EXPERT

THE MULTI-PURPOSE **"HALLIGAN TOOL"**

TO GET INSIDE *QUICKLY*

TO SAVE *LIFE* AND *PROPERTY*

1 piece of No. 4140 Steel.

FOR FORCIBLE ENTRY • OVERHAULING • DEMOLITION • CRASHES • WRECKS • HEAVY LIFTING

AND THE **"HALLIGAN HOOK"**

With Triple Insulation — Available in 3', 6', and 10' sizes.

Chrome, Molybdenum-Alloy Steel Tubing — triple heated for great strength — three dimensional head of No. 4140 steel for accurate performance with Tin, Wire Lath, Light Metals, Boards of All Types, and Frames.

M.A. HALLIGAN

1505 Metropolitan Ave.
New York 62, N. Y.

"When life is in danger, ONLY THE BEST is good enough"

Chief of the LAFD

ON JANUARY 16 of this year, First Assistant Chief Engineer William L. Miller, of the Los Angeles, California, Fire Department, was appointed as Chief Engineer. He succeeded Chief John H. Alderson who recently retired from that position.

Chief Miller has been a member of the Department since 1933. He became Captain in 1942, was appointed to Battalion Chief in 1948, then became First Assistant Chief Engineer on July 1, 1954, when he was acting in the capacity of Fire Prevention Engineer. In addition to acquiring fire fighting experience in practically every section of the city while coming up through the ranks, Chief Miller also served as a Lieutenant Commander in Naval Damage Control operations during World War II. He was born in Grundy County, Iowa, in 1906, where he attended high school and afterwards entered Cedar Rapids Business College. He came to Los Angeles in 1928.

Box 21's Annual Report

RECENTLY received at the NFPA Executive Office was the annual report of Box 21, Dayton, Ohio. This is an association of 35 members who have pooled their own money to purchase rescue equipment to assist the Dayton Fire Department, the Police Department, the Montgomery County Sheriff's Office and the State Highway Patrol.

Primarily, Box 21 is organized as a club and is composed of men who formerly were "buffs" or "sparks." Now, through volunteer labor and funds of the members, Box 21 has acquired some excellent rescue equipment. The club has three fully equipped boat and trailer units. Eight members carry inhalators in their personal automobiles. There is also a Chevrolet heavy-duty rescue vehicle with first aid, rescue and lighting equipment, and an International "walk-in" panel truck equipped with stoves, refrigerator, water supply and power plant.

During 1955, Box 21 responded to 56 inhalator calls, 9 fire calls, 7 alarms for persons who had drowned, 22 alarms for near-drowning incidents which required first aid and resuscitation, and 105 calls for miscellaneous types of duty such as

traffic details, auto accidents, and assisting the sheriff and police in emergency incidents.

Officers of the association include Chief Ed Powers as President; Assistant Chief Don Everhart as 1st Vice President; District Chief I. G. Ostendorf as 2nd Vice President; Captain W. Gress as Secretary; and Captain Charles Steuer as Treasurer.

Letter to FIREMEN

Gentlemen:

In the August, 1952, issue of FIREMEN there is an article on ladder loading. It states that it is considered proper practice to place a metal ladder so that it is supported at the top. It also states that the tips of wooden aerials are placed out from buildings so that the ladders will be supported entirely from the base. Would you please explain this difference in procedure for the metal and wooden aerial ladders?

Sincerely,

SAM D. TANKSLEY,
Los Angeles County Fire Department,
Los Angeles, California

Dear Mr. Tanksley:

. . . The wooden ladder generally has substantial "give" when fully extended, or nearly fully extended, and an allowance of about two feet is made so that the ladder will be in proper position when men are on it. The metal aerial is somewhat more rigid and may be operated fully extended from the turntable, or resting against the building. However, in the latter case, the ladder should be brought to rest very carefully and locked, so that substantial weight will not be brought against the building, because in event of structural collapse a sudden load may be placed on the ladder.

Naturally a ladder properly placed would be stronger when supported from two ends, but for the wooden ladder, this might put undue stress in the center of the ladder where the fly and bed sections overlap. . . . Operators should be very careful in placing metal ladders against buildings when the ladder may be at an angle with only one beam touching. This can give an undesirable twist and stress to the ladder. Rather than permit this, the full weight of the ladder should be on the turntable.

Very truly yours,

WARREN Y. KIMBALL, *Manager*,
NFPA Fire Services Department.

YOU CAN POLISH THIS BADGE FOR A.. Lifetime

HERE IT IS THE NEW BLACKINTON **HI-GLO** BADGE

Only a Solid Gold Badge or a **HI-GLO** Badge will last a lifetime.

THIS BADGE WILL MAKE YOU THINK TWICE — BEFORE ORDERING ORDINARY GOLD BADGES . . . . *WHY?*

. because this new **HI-GLO** Badge is different. It is made from an entirely new material — a rich looking golden metal that is solid gold color throughout. That's why you can polish a **HI-GLO** badge for a lifetime. Every **HI-GLO** badge will have deluxe enamel lettering and a ruby colored stone (optional at extra charge) set in the eye of the eagle. You can see, the new **HI-GLO** badges will be something special, a distinctive badge for those who want the very finest gold color badge.

Your Blackinton equipment supplier has samples of the new HI-GLO badge. Ask him for more information.

BLACKINTON
V. H. BLACKINTON & CO., INC.
ATTLEBORO FALLS, MASSACHUSETTS

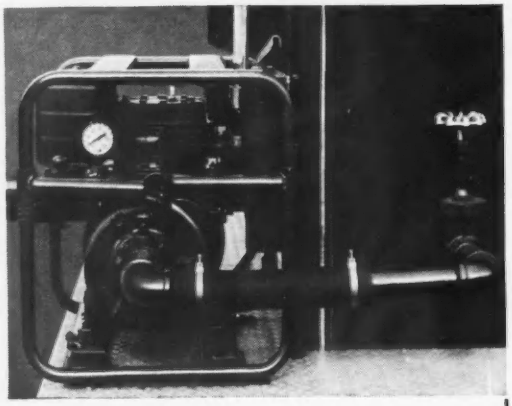
HALE

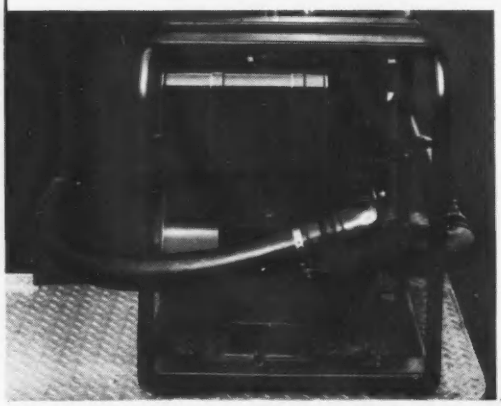
TYPE FZZ

Portable Unit

Installed on Running Board of Apparatus

Picture at right shows Hale FZZ portable pumping unit (from Suction Side) neatly installed on running board of pumper. Shut-off valve at right leading from Booster tank.





Below, view of FZZ from Discharge Side showing Discharge running into Booster line.

Pump can be easily detached to fight fire direct; as standby pump; or to supply larger pumper from source of water inaccessible to the pumper.

The FZZ will supply from draft 2 capable fire streams thru 1½" lines. Performance substantially exceeds NBFU and NFPA cap. and pressure requirements.

Write for FZZ folder today. Ask for Demonstration.

HALE FIRE PUMP CO. Conshohocken, Pa.

Fire Pumps in all Standard Capacities

MIDWESTERN

Safety Clothing for FIREMEN

The Original STRIPED SAFETY COAT

- ★ New Yellow Rubber Stripes!
- ★ Maximum Visibility!
- ★ Maximum Durability!
- ★ Exclusive Safety Features!

YOU deserve the BEST PROTECTION OBTAINABLE for your hazardous work of protecting life and property against fire. The Mackinaw Safety Coat with new yellow stripes is the answer! Highly visible stripes are rubberized as part of the material . . . not painted, glued or sewed on. There is no substitute for the superior quality, design, fabric texture and safety features you get by specifying MIDWESTERN!

QUALITY UNEXCELLED

For complete information on our full line of safety clothing for firemen, see your Midwestern dealer. A letter to the factory will also bring you literature and materials for your inspection.

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Safety Coats**

Disaster Truck

(*Continued from page 22*)

about five miles. The disaster truck is also equipped with a radio telephone and an additional FM radio receiver monitors the frequency of the Boston Fire Department. Two loudspeakers, one fixed and one portable, are available for announcements and operational directions at the scene of a disaster.

Other emergency equipment carried on the new vehicle includes a 12-ton hydraulic jack, rope, crowbars, wrecking tools, shovels, handlights, fire extinguishers, and a resuscitator. A 35,000 BTU heater assures that the interior of the truck will be warm and comfortable. A folding bench, which drops down to fill the wide center passageway, makes an ideal spot for treating first-aid cases or interviewing disaster victims.

The new truck is being operated by the Red Cross Survey Committee, a group of 12 volunteers who are well trained in disaster relief work. Operating on a 24-hour basis, the unit responds automatically to all 3-alarm fires in the Chapter territory. It may also be "special called" by officials when the need arises. Because the Boston Red Cross Chapter is composed of 17 cities and towns, the unit may be sent to any of these communities at the request of the local officials. The truck may also be assigned to disaster relief activities outside the Chapter territory by the Red Cross Area Disaster Headquarters in Alexandria, Virginia.

ADT Expands

ON MARCH 1, the American District Telegraph Company, with executive offices in New York City, bought controlling interest in the Dominion Electric Protection Company, which has offices in Montreal, Quebec, Ottawa, Toronto, Hamilton, London and Winnipeg. The latter company's services to its 8,000 subscribers included sprinkler supervisory, watchman supervisory, automatic and manual fire alarm, and burglar and holdup alarm services. The systems and services of the ADT Company will be fully available to the Dominion company under the new consolidation.

Useful Brochure on Oil Burners

THE Institute of Appliance Manufacturers, with offices at the Shoreham Hotel, Washington 8, D.C., recently mailed a useful brochure to fire chiefs and state fire marshals. It contained several informative publications and letters which described the use of domestic oil-fired heating and cooking equipment, and the safety rules for installation and operation of such equipment.

Also included in the brochure was NFPA Standard No. 31 — "Installation of Oil Burning Equipment"; the standard for oil-burning stoves issued by the Underwriters' Laboratories, Chicago, Illinois; "Sparky's" home fire inspection blank; and a well-illustrated service man's handbook titled "Vaporizing Oil Burners." The latter is a 116-page manual containing both elementary and technical information for solving field problems of such equipment. Its seven chapters cover: the vaporizing burner; chimneys and draft; fuel oil; oil handling parts; auxiliary equipment; installation, initial adjustments and operation of burners; and service.

The manual may be obtained for $1.00 per copy by writing to the Institute at the above address. The complete brochure may be obtained from the same source for $2.50. The brochure and manual were prepared by the Technical Committee of the Institute of Appliance Manufacturers.

Fire Protection for Thruway?

THE New York State Thruway Authority recently offered to pay fire departments for responding to fire calls on the superhighway. According to reports the Director of Operations of the Authority offered the payment to fire coordinators in the 19 counties of New York State which border the highway. Payment would amount to $50 for the first call, and $35 for each additional call, up to $200 per year.

Make your plans now to attend the 60th NFPA Annual Meeting Hotel Statler Boston, Massachusetts June 4-8, 1956

Better Hose Care-with CIRCUL-AIR HOSE CONDITIONING EQUIPMENT

WASHERS • DRYERS • TURN-TABLES • STORAGE RACKS

FIRE HOSE DRYER

The patented, electrically operated Circul-Air hose dryer circulates pre-warmed fresh air through loosely coiled hose at the rate of 5 to 6 air changes per minute. Saves floor space, hard work and lengthens hose life! No other drying method is so fast — so economical — so easy to use.

LABORATORIES APPROVED

USED IN OVER 3,000 LEADING FIRE DEPARTMENTS

Roto-Jet FIRE HOSE WASHER

Washes, Rinses, Drains hose thoroughly and quickly. Hose is self-propelled. Simple one-man operation. With or without detergents ashes, dirt, mud and sludge are automatically scrubbed out and flushed away.

WRITE FOR NEW FOLDER

If you are planning to build or remodel, send for our brochure "Fire Station Design."

THE CIRCUL-AIR CORPORATION 575 EAST MILWAUKEE DETROIT 2, MICHIGAN

EMERGENCY POWER

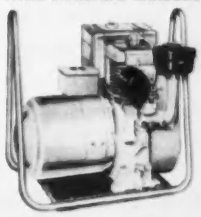
when you need it with a

WIND POWER

PORTABLE ELECTRIC PLANT

500 To 2250 WATT WITH CARRYING HANDLES

Operates smoke ejectors, flood lights, pumps and radio during fire emergencies. *Lives can be saved* when you are equiped with Portable Electric Power. Also permanent station installations with automatic line transfer controls which automatically cuts in stand-by power during failure or disaster. Investigate now—write for full information, illustrated folders and prices.



OTHER MODELS UP TO 100 KW

WINPOWER MFG. CO.

Dept. G74, Newton, Iowa

CAIRNS FIRE HELMETS

LEATHER, ALUMINUM AND PLASTIC

REGULATION AND DROP BRIM MODELS

The "NEW YORKER" — No. 5A — LEATHER

"NO PRICE IS TOO HIGH TO PAY FOR SAFETY."

Write for Catalog 350

CAIRNS & BRO., INC. - Allwood, Clifton, N. J.

SINCE 1836

POWHATAN

PLATE No. 175

LEADER LINE SIAMESE
Two-Way-Quarter Turn
Male outlets — ¾", 1", 1¼", 1½" or 2".
Female Swivel inlet 1½", 2" or 2½"
Pin Lug or sensible lug swivel.
Rough body, painted red with polished bronze or chromium plated trim.

If You Do Not Have One,

Send For Our New Catalog "A" Today.

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
Phones 93 & 94 Charles Town, West Virginia
Established 1892

Philadelphia Training

FIRE Commissioner Frank L. McNamee of Philadelphia, Pennsylvania, has made facilities of that Department's training school available to other nearby fire departments. Deputy Commissioner George E. Hink has invited fire chiefs of Bucks, Chester, Delaware and Montgomery Counties to send members of their commands to the Philadelphia school. A 10-week basic course for rookie fire fighters will begin this month. Students will receive instruction in handling hose and ladders, knots and hitches, use of tools and equipment, operation of vehicles, rescue and first aid, chemistry of fire, ventilation and fire fighting hazards.

The Philadelphia training school is located at Ridge Avenue and Cinnaminson Lane. It consists of a 2-story brick and concrete structure with classrooms, offices, a library and a storage area. There is an adjoining 60-ft. drill tower equipped with fire escapes, standpipe and sprinkler systems and a smoke chamber for gas mask drills.

New Members in NFPA

THE following fire chiefs and fire departments recently joined the Association. Current NFPA Fire Department Membership totals 2,193 fire departments and 26,196 men.

Alabama: Birmingham Fire Department, Birmingham.

Alberta: Forest Lawn Fire Department, Forest Lawn.

Arizona: Globe Fire Department, Springdale.

Colorado: Cheraw Fire Department, Cheraw.

Connecticut: Bozrah Volunteer Fire Company, Fitchville West Shore Fire District, West Haven.

Georgia: Chief J. K. Harrison, St. Simon's Island Volunteer Fire Department, St. Simon's Island.

Maryland: Chief Shelben Thompson, The Jacksonville Volunteer Fire Company, Phoenix.

Michigan: River Rouge Fire Department, River Rouge.

New Jersey: Alpine Fire Department, Alpine.

New York: Selkirk Volunteer Fire Company No. 2, Glenmont.

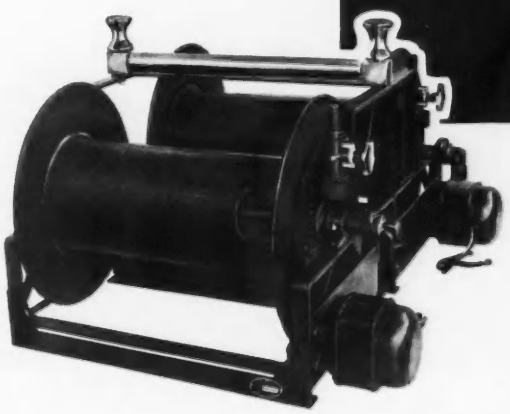
Washington: Assistant Fire Chief C. M. Wight, Central Fire Station, Richland.

Wisconsin: Pewaukee Fire Department, Pewaukee.

When you want the best, SPECIFY...

HANNAY FIRE HOSE REELS . . . HANNAY FIRE HOSE REELS . . .

HANNAY



Built *by* firemen *for* firemen, Hannay Hose Reels have served so faithfully for over twenty years that they are accepted as the standard of quality by thousands of firefighters.

Your men and your equipment deserve the finest. Make sure they *get* it. *Specify* Hannay Fire Hose Reels.

Sustaining Member

NEW! *Complete 28-page illustrated catalog including details on reels for hoses from 1" to 3" I.D. Write for free copy.*

. . . Greatest Name in Hose Reels **HANNAY**®

© 1956 C.B.H. & S., Inc.

CLIFFORD B. HANNAY & SON, INC., 536 SPRUCE ST., WESTERLO, N.Y.

YOUR FIRE SCHOOL CALENDAR

Alabama: The 20th State Fire College will be held in University, Alabama, May 28–June 1. For further information write to M. O. Hulsey, P.O. Box 1813, University, Alabama.

California: The Fire Service Instructors' Conference will be held in Fresno, May 21–25. The Fire & Arson Investigation Short Course will be held in University of California, Berkeley, June 11–15. For further information write to Thomas S. Ward, State Department of Education, 721 Capitol Ave., Sacramento, California.

Colorado: The Colorado State Firemen's Convention & Fire School will be held in Durango, June 20–23. Write to Lou Gibbs, 1331 Garfield Ave., Loveland, Colorado.

Illinois: The 32nd Annual Illinois Fire College will be held in University of Illinois, Champaign-Urbana, June 11–14. Regional schools will be held at Centralia, April 12 to May 17 and Danville, April 13 to May 18. Write to Robert K. Newton, 116D Illini Hall, Champaign.

Illinois: The Illinois Fire Chiefs' Association will meet May 12, at the Hotel Wolford, Danville, Illinois. For information write to Chief Ray Miller, Peoria Fire Department, Peoria, Illinois.

Iowa: The 32nd Annual State Fire School will be held in Iowa State College, Ames, May 22–25. For further information write to Keith Royer, 110 Marston Hall, Iowa State College, Ames.

Kentucky: The Kentucky Fire School will be held in University of Kentucky, Lexington, June 5–7. Write to John L. Thompson, 940 Starks Bldg., Louisville, Kentucky.

Louisiana: The Louisiana State Fire College will be held in Baton Rouge, April 9–12. Write to Chief Robert A. Bogan, Fire Department Headquarters, Baton Rouge.

Michigan: The 28th Annual Michigan Fire College will be held in University of Michigan, Ann Arbor, June 19–22. Write to Francis Hartman, 4524 Administration Bldg., University of Michigan, Ann Arbor.

Mississippi: The Mississippi State Fire School will be held in Mississippi State College, Starkville, June 18–22. Write to Joseph I. Fetters, University of Missouri, Room 101, Bldg. T-11, Columbia.

Montana: The Montana State Volunteer Firemen's Convention will be held in Butte, June 20–23.

Nebraska: The Nebraska State Fire School will be held at Grand Island, April 15–17. Write to Russell D. Salak, Secretary-Treasurer, Nebraska State Volunteer Firemen's Association, Schuyler.

Oregon: The Oregon Fire Chiefs' Association will be held at Seaside, June 10–13.

Wisconsin: The Wisconsin State Fire Chiefs' Association will be held at Wausau, July 23–25.

Pennsylvania: The following courses are scheduled for the Pennsylvania Fire School at Lewistown: Standard Fire Fighting April 23–27; Advanced Fire Fighting May 7–11; Operation and Maintenance of Fire Apparatus May 21–25; Standard Fire Fighting June 4–8; Advanced Fire Fighting June 18–22; Operation and Maintenance of Fire Apparatus July 9–13; Standard Fire Fighting July 23–27; Annual Fire School and Fire Service Instruction August 6–10; Fire Department Officership August 13–17; Advanced Fire Fighting August 27–31; Operation and Maintenance of Fire Apparatus September 10–14; Standard Fire Fighting September 24–28; Advanced Fire Fighting October 8–12; Operation and Maintenance of Fire Apparatus October 22–26.

Saskatchewan: The Saskatchewan Association of Fire Chiefs will hold its Sixth Annual Conference at North Battleford, June 24–26. Write to Chief Norman Carsewell, Fire Department Headquarters, North Battleford, Saskatchewan.

750 Gallon Darley Ford Pumper

The pump is the Darley Champion Type SH750 manufactured exclusively by W. S. Darley & Co. and used on all Champion Fire Apparatus. A 3-stage centrifugal with superior engineering features which guarantee brilliant performance throughout the entire range of pumping requirements for fire fighting.

The SH Series Champions are double duty fire pumps which provide the complete range of volume performance for heavy streams plus the fire smashing efficiency of high pressure fog with 60 gallons per minute at 850 lbs. of pressure at the pump. Actual tests show the SH pump develops pressure to 1,000 lbs.

Write for Fire Equipment Catalog and Fire Apparatus Booklet

AT YOUR SERVICE: Sales and Service Representatives — East, Midwest, North, South

You'll want to know all about our low cost finance plan or combination PURCHASE-RENTAL plan.

W. S. DARLEY & CO., Chicago 12

Factories — Chicago and Chippewa Falls, Wis.

Training School in Marinette

FOURTEEN different fire training courses, each lasting three days, will be conducted during 1956 on the 10-acre fire test field of Ansul Chemical Company, at Marinette, Wisconsin.

At the fire school, which has been conducted annually for more than 10 years, Ansul Company instructors will teach the latest techniques in fire extinguishment to representatives of industry, government and the municipal fire-fighting services.

As in the past, registration, which is on a first-come, first-served basis, will be limited to 25 men for each class to insure maximum benefit to those participating. Dates for the various sessions are:

May 21–23.
June 4–6, 11–13, 18–20, 25–27.
July 9–11, 16–18, 23–25, 30–Aug. 1.
August 20–22, 27–29.
September 17–19, 24–26.
October 8–10.

In addition, there will be a special three-day school, September 10–12, exclusively for employees of the U. S. Steel Corporation. On April 26–27, the senior class of Illinois Institute of Technology will make its annual visit to Marinette to obtain practical experience in fire fighting to supplement class-room instruction.

Students at all of the schools will be taught to use hand, wheeled and large stationary fire equipment against flammable liquid and propane gas fires of all sizes and types, so that they can return to their home plants better equipped to train fire brigade members and others in the latest fire-fighting techniques. The school schedule also calls for group discussions, motion picture film showings and a plant tour.

There is no tuition fee. Additional information may be obtained by writing to the Director, Customer Training School, Ansul Chemical Company, Marinette, Wis.

Correction Notice

IN THE article titled "Hose Laying Lorries" in the January, 1956, issue of FIREMEN, it was stated that the lorries were manufactured by Rolls-Royce. This was not correct. The lorries were made by Merryweather and Sons, Limited, Greenwich High Road, London S.E., England.

THEY
LOOK ALIKE
BUT THERE'S
ONE
IMPORTANT
difference*

This violin cost $39.95 plus tax. It looks *exactly* like the violin shown below, but . . .

This violin— a genuine Guarnerius— would cost $2,700.00— if you could buy one!

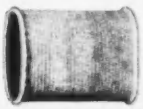
*The important difference, of course, is *what you want to do with the instrument*. You wouldn't give a student a Guarnerius— nor a concert artist a beginner's instrument.

THE *SAFEST* INVESTMENT IS BI-LATERAL FIRE HOSE... IT COSTS *LESS* TO BUY THE BEST!

If you want *safety* AND *savings*, one way to be sure is to *look at the record!*

Bi-Lateral furnishes FREE hose record cards—send for your supply today.

Here's a sample piece of fire hose—it looks just like the piece below—yet . . .



This fire hose is worth 10 times— maybe 1,000 times—as much!

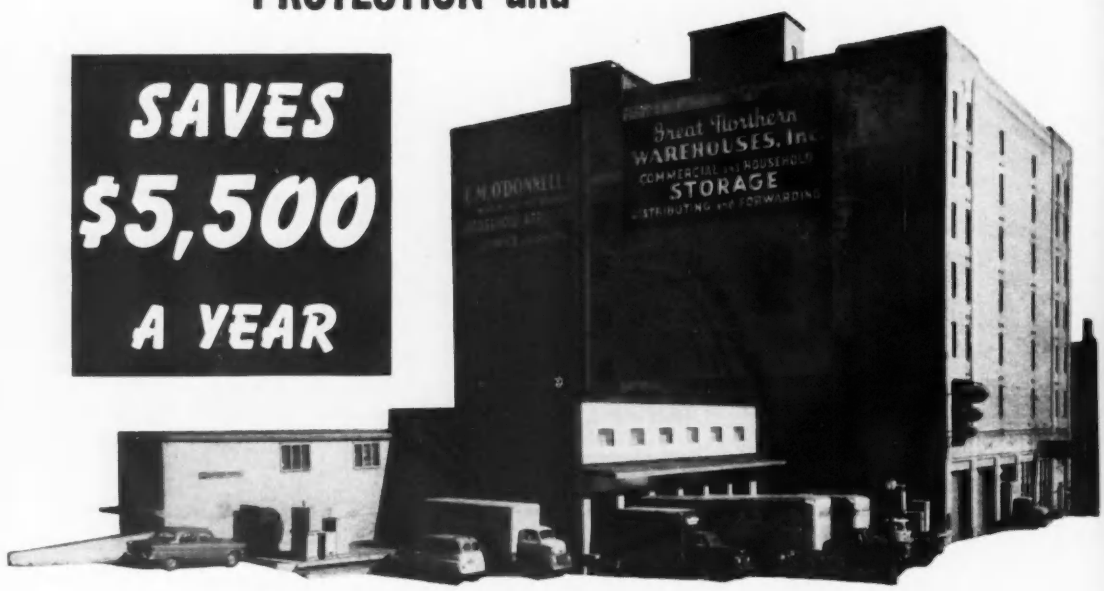
Bi-Lateral hose is built up to a standard not down to a price! There's a reason for Bi-Lateral—it's to put out fires! It will prove to be your most *economical* purchase as well as your *safest* investment!

(Bi-Lateral *IS* cheaper *in the long run*. Hose record cards prove it! Send for yours . . . free.)

Bi-Lateral® FIRE HOSE CO.

20 NORTH WACKER DRIVE • CHICAGO 6, ILLINOIS

Great Northern WAREHOUSES, Inc. protects its property *Automatically*.... gets better FIRE and BURGLARY PROTECTION and



Use of ADT Central Station Automatic Services to protect our warehouse around the clock against fire, burglary and heating equipment failure has, through the years, been highly satisfactory. These services not only have proved efficient, but they give us a current annual saving of $5,500 over the cost of less effective measures.

Vice President

Year after year, customers of Great Northern Warehouses, Inc., Syracuse, N. Y., have had assurance of complete and effective protection against fire, burglary and other hazards. The building and its contents are safeguarded throughout by a combination of ADT Central Station Sprinkler Supervisory and Waterflow Alarm, Burglar Alarm and Automatic Heating Supervisory Services.

The satisfaction expressed by Mr. Hammerle is typical of the comment of thousands of warehousemen and other business executives who know that ADT Automatic Services give better protection for property, profits, customers' goods, and employees' jobs than other methods, *and at less expense.*

Whether your premises are new or old, sprinklered or unsprinklered, there is an ADT Automatic Protection Service to detect dangerous conditions and to notify fire, police or other protective forces, immediately and *automatically.*

An ADT specialist will be glad to show you how combinations of automatic services can safeguard your property. Call if we are listed in your phone book; or write to our Executive Offices.

ADT

Controlled Companies of
AMERICAN DISTRICT TELEGRAPH COMPANY
A NATIONWIDE ORGANIZATION
Executive Offices
155 Sixth Avenue, New York 13, N. Y.

FROM . . .

WARD LaFRANCE

A *NEW* Aerial Ladder

WARD LA FRANCE 85A 250 H.P. now seeing service in Morrisville, Penna. Ground ladders supplied as standard equipment.

• FROM WARD LA FRANCE comes a new Aerial Ladder . . . incorporating the most modern construction, control and operating features. Safe . . . compact . . . powerful . . with a big 250 H.P. fire-fighting engine that enables it to go into action fast. Available in 4-wheel or tractor-drawn models, all engineered with high power-to-weight ratio. Telescopic sections on ladder generously overlap when extended for greater stability. Rubber-covered rungs provide safer footing . . . specially engineered handrails add strength, practicality. Three lengths . . . 65, 75 or 85 feet. Maximum lateral stability assured by unique Ward LaFrance design. Investigate this new Aerial Ladder. Write Ward LaFrance today.

WARD LA FRANCE TRUCK CORPORATION

Fire Apparatus Manufacturers for over 38 Years

GENERAL OFFICE & FACTORY: Grand Central Avenue, Elmira, N.Y. Tel. 3-5631. **DIRECT FACTORY BRANCH:** 139th Street & Bruckner Blvd., New York 54, N.Y., Tel. CYpress 2-3300. **EXPORT:** Ward LaFrance International, Inc., Elmira, N.Y., U.S.A., Cable Address: "Wardtruck"

FIRE DEPARTMENTS
SAVE MONEY ON AMERICA'S
Finest Selection of

**TROPHIES — CUPS
PLAQUES — MEDALS**

FREE
ENGRAVING
On all purchases From National!

Write Today
For Your Copy
of Our

**FREE
20-PAGE
1956
CATALOG**

NATIONAL TROPHY SALES, INC.
Dept. F2, 75-77 W. Van Buren St.
Chicago, Illinois

What to Do about Mailbox Fires

THE Boston, Massachusetts, Fire Department recently received communication from the United States Post Office which explains how that governmental branch would like to have mailbox fires handled. Reprinted below, the communication may serve as a guide to many other fire departments.

"When called upon to extinguish fires within street letter boxes, your cooperation is requested in preventing, insofar as is possible, damage to mail contained therein, as well as damage to street letter box equipment.

"Experiments conducted by the Post Office Department have disclosed that such fires can be extinguished, or effectively checked, by the use of CO_2 or other dry chemical extinguishers, which can be discharged through the partially opened letter drop.

"The use of liquid as an extinguishing agent, as noted in the past, has caused the addresses on salvaged letters to become illegible.

"It is further requested that, when called for a fire in a collection box, your Fire Department notify the Post Office, so that an employee may be sent to open the box and protect the mail."

Useful Board For Illustrating Lectures

SOME useful training aids have been developed by C. L. McGlamery, Chief of the Fire Brigade, Chance Vought Aircraft Incorporated, Dallas, Texas. (Grand Award Winner, Industrial Division, NFPA Fire Prevention Week Contest for 1955.) Since the department devotes considerable time to training for combat of airplane crash fires, Chief McGlamery utilizes this 4 by 4 foot board which is covered with flannel and mounted on an easel. Photos are taken of airplanes and crash equipment which are to be described in the training session. An artist paints in fog streams, fire, and smoke, and the pictures are reduced to provide scale models of appropriate size. Flannel is glued to the backs of the models, and since they will adhere to the flannel on the board, they can readily be moved to any position. Ordinary string serves as hose line. Other scale models used include hydrants, lakes, and several types of fire apparatus.

Sounds for *Safety*

**engineered by
FALCON**

New Falcon Automatic Fire Detectors and Alarms provide constant protection wherever fire is a hazard. Self-powered by DuPont "Freon", they give early warning at first sign of fire.

U. L. Approved for 20 Ft. Spacing—Low Cost—Non Electric—Easy Maintenance —Easily Installed—30 Yr. Guarantee.

Falcon manually operated Emergency Signaling Horns are portable, self-contained and "Freon" powered.

Many types and sizes. Special designs for special uses.

Write for details—

**FALCON ALARM
COMPANY, INC.**
243 Broad St., Summit, N. J.

***Lettered Tee Shirts ★ Sweatshirts
Flags ★ Banners ★ Emblems***

SAMPLES SENT ON REQUEST

FACTORY TO YOU WHOLESALE PRICES

NATIONAL FLAG & EMBLEM CO.
745 MAIN STREET • BUFFALO 3, NEW YORK

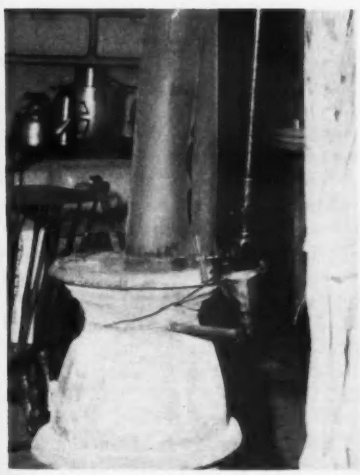
Oil was supplied from this 30-gallon tank on the roof . . .

CAN YOU TOP THIS?

down through the ceiling, where some soaks the wood . . .

IS YOUR fire department conducting a dwelling inspection program? If so, perhaps some fire fighter has found a heating installation to equal or exceed this as a potential killer, but we hope not.

This "furnace" was found by Wilmington, Massachusetts, fire fighters in a roofed cellar which served as a dwelling for two adults and six children. Oil dripped through the pipe onto a "deck" which the owner had constructed in the base of the stove. To start the fire he applied a match to oil-soaked sawdust which he had placed on the deck. (*Photo credit to: Candids by Carter.*)



into this control valve from an ammonia pipe line. Note condition of stove pipe.

Complete stove. Can on floor contained oil for igniting sawdust.

IN YOUR HANDS...

A FIREFIGHTER'S LIFE

If you hold in your hands the responsibility of selecting firefighter's equipment, you'll want the extra margin of protection in Bullard fiber glass fire helmets. Compare other helmets for strength and resiliency . . . you'll prove to yourself that fiber glass helmets are safer, more durable—choice of molded-in colors.

SINCE 1898

E. D. BULLARD COMPANY

DISTRIBUTORS THE WORLD OVER

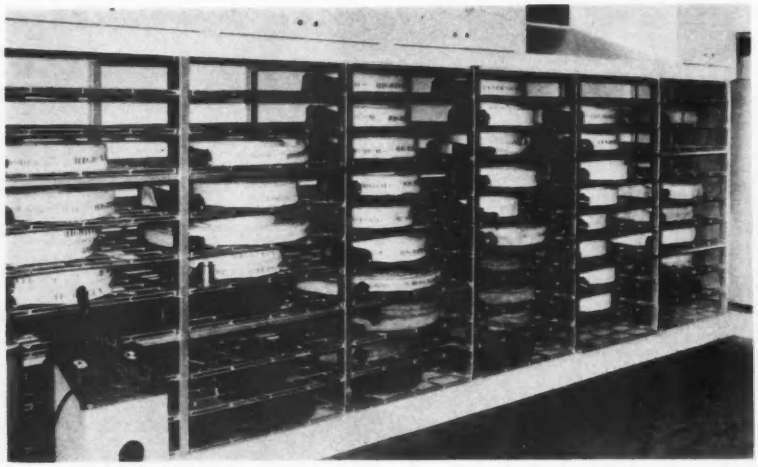
275 Eighth Street
San Francisco
California

T. M. REG.
U. S. PAT. OFF.

EVERYTHING BULLARD IN SAFETY

FIRST AID KITS Packed in heavy duty case with an air tight sealer that protects first aid supplies even if subjected to intensive exposure to water and dust. Contents each individually wrapped in sterile unit packs.

New Fire Equipment & Catalogs



Mobile Rack Units

The Circul-Air Corporation, 575 East Milwaukee Avenue, Detroit 2, Michigan, is now producing mobile hose storage racks. One of these called the "Portorak" is mounted on locking casters. It is equipped with a detachable turntable to facilitate reloading of apparatus. The rack can hold at least 1800 feet of 2½-inch hose and is made of heavy-gauge, square steel tubing. The other rack model is of the built-in type which utilizes the removable trays from the hose drier and stores hose in the same loosened position as in the drier. It is available in standard two-section or three-section units or in any increment of 10 shelves per tier. Literature on these hose racks and on other products of the Corporation may be obtained by writing to the above address.

For Poison Oak, Ivy, or Sumac

Fire fighters who combat brush and forest fires may be interested in the salve distributed by E. D. Bullard Co., 275-8th Street, San Francisco, California. Called "Bullard's Formula," the salve is available in heavy-duty polyethylene 1⅛-oz. tubes. When blisters caused by poison ivy, poison oak, or sumac appear on the skin, application of the formula forms a protective film, and according to the manufacturer ends itching quickly. For further information and descriptive literature write to the manufacturer at the above address.

Save Lives — Save Money

"Care & Maintenance of Fire Hose"

A NEW FILM NOW APPROVED FOR FCDA MATCHING FUNDS

Gentlemen: We are interested in purchase of your new 16 mm. fire training film, "CARE AND MAINTENANCE OF FIRE HOSE," black and white, sound, 21 minutes. Prints, $100 each, including reel, can and protective vacuumating. Fibre shipping case optional at $2.00 ea. This film is approved for the Matching Funds Program of FCDA for its value in Civil Defense.

Check One: Please send further information ☐
Please send preview print, to be returned prepaid if not purchased ☐
Please send.....prints ☐ in fibre shipping case ☐

Name .....

Address.....

Cut out and mail today, to

FIRE-FIGHTING FILMS 304A Green Street, San Francisco 11, Calif.

INDEX TO ADVERTISERS

	Page		Page
Akron Brass Mfg. Company, Inc.	7	Halligan Tools	24
American District Telegraph Company (ADT)	32	Clifford B. Hannay & Son, Inc.	29
American-Marsh Pumps, Inc.	5	Howe Fire Apparatus Company	3
Bi-Lateral Fire Hose Company	31	Mack Mfg. Corporation	38
V. H. Blackinton & Company, Inc.	25	Midwestern Safety Mfg. Company	26
E. D. Bullard Company	35	Mine Safety Appliances Company	39
Cairns & Brother, Inc.	28	National Flag & Emblem Company	34
Circul-Air Corporation	27	National Trophy Sales, Inc.	34
W. S. Darley & Company	30	Powhatan Brass & Iron Works	28
E. I. du Pont de Nemours & Company, Inc.	6	Quaker Rubber Corporation, Div. of H. K. Porter Company, Inc., of Pittsburgh	10
Falcon Alarm Company, Inc.	34	Rockwood Sprinkler Company	8
Federal Sign & Signal Corporation	24	D. B. Smith & Company	9
Fire Fighting Films	36	Stephenson Corporation	37
Fyr-Fyter Company	23	Ward LaFrance Truck Corporation	33
Gamewell Company	2	Winpower Mfg. Company	27
Hale Fire Pump Company	26	Wooster Brass Div., Fyr-Fyter Company	4

NEWS ITEMS AND CATALOGS

Stanley R. Smith Co. of Cleveland has been appointed Ward LaFrance fire apparatus representative for northeastern Ohio. The new Ward LaFrance representative has offices at 1200 West 9th St., Cleveland. Ward LaFrance now operates as a subsidiary of Glen Alden Corporation. . . . Special hazard fire protection is detailed and illustrated in a new 28-page booklet by *"Automatic" Sprinkler Corp.* of America, Youngstown 1, Ohio. For your own information and for industries in your community, write today for a free copy of this booklet. . . .

Leece-Neville Co., 1374 East 51st St., Cleveland 3, Ohio, announces two new four-page folders illustrating and describing two new models of their alternators to provide ample current for 6-volt and 12-volt systems at all speeds for fire apparatus and rescue cars.

To assist buyers of gas masks, *Acme Protection Equipment Co.*, South Haven, Michigan, offers a special test bulletin which presents comparative ranges of vision angles of leading makes of single and double-lens types of gas mask equipment. . . . A new model "In-Plant" fire truck carrying large volumes of a variety of extinguishing agents is announced by *Seco Engineering & Mfg. Div.*, Seco Safety Products Co., 1300 W. Fort St., Detroit 26, Michigan.

Now YOU Can Save More Lives!

When YOU Are Prepared to Act Quickly!

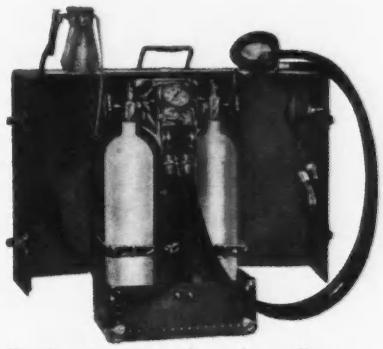
with the versatile

STEPHENSON PORTABLE RESUSCITATOR

You Have Four Machines in One

Resuscitator **Inhalator** **Aspirator** **Assistor**

DEPENDABLE
EFFICIENT
SAFE
SIMPLE



Most effective in cases of smoke suffocation, gas poisoning, heart attack, electric shock, asthma, etc.

By adding the Midget Resuscitator you can resuscitate an extra patient. The extension hose permits you to aid the patient partly buried under debris, in high places or any place hard to reach.

Hundreds of your fellow chiefs have learned from experience that Stephenson Resuscitators are the most effective and do more for the patient.

STEPHENSON CORPORATION
RED BANK NEW JERSEY

"Makers of the Harger Drunkometer and Breathalyzer for determination of intoxication by analysis of breath."

Represented in Canada by WILSON & COUSINS, Toronto

STEPHENSON CORPORATION R-101
Red Bank, New Jersey

Gentlemen:

Please send me information about Stephenson Portable Resuscitator.

☐ Demonstration without obligation.
☐ Pamphlet.

Name.....

Address.....

City..... State.....

CANADA's *first city gets first-class fire protection*

MONTREAL'S CONTINUING MODERNIZATION PROGRAM HIGHLIGHTED BY NEW MACKS

Latest Mack delivery to Montreal—Five B-125 triple combination pumpers which pump 1,050 Imperial Gallons per minute (1,250 U. S. gallons). Note compact appearance for this large effective capacity.

Montreal, Canada's largest city, believes in giving its residents and industries the best possible fire protection. Consequently, the municipality carries on a permanent program of modernizing its equipment, with the result that the Montreal Fire Service is today one of the world's most effective fire-fighting forces.

During the past three years, Montreal has chosen Macks for the majority of its new apparatus. This includes seven Mack pumpers, and two Mack-Magirus 100-foot automatic aerials, with two more pumpers and another aerial on order.

Like other fire departments with big jobs to do, Montreal has learned from experience that Macks offer unmatched performance and flexibility to meet the demands of modern fire-fighting and traffic conditions. Their long life and low upkeep make them real money-savers, while ready availability of parts insures standby readiness for action.

Get full details on the apparatus you need from your nearest Mack Branch or Distributor. Mack Manufacturing Corporation, Empire State Building, New York 1, N. Y.

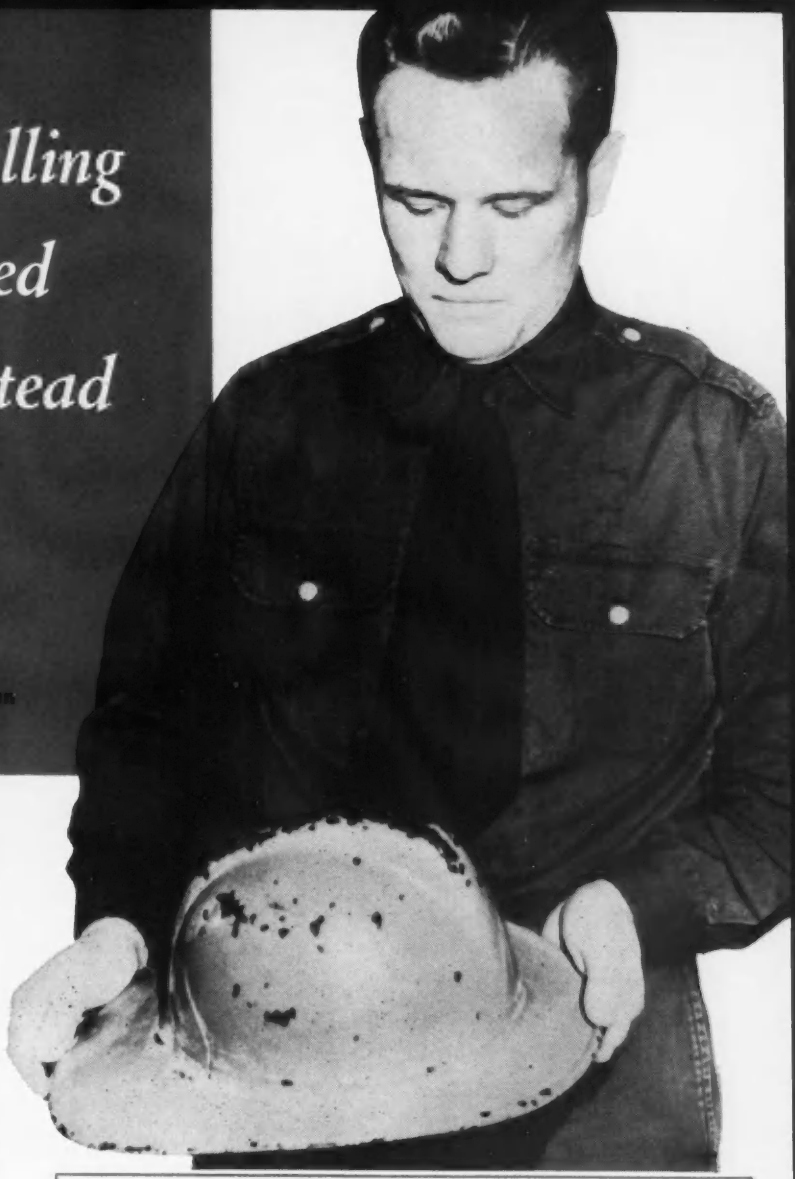
MACK
FIRE APPARATUS

3859

COMPLETE LINE OF PUMPERS • • • SQUAD AND HOSE WAGONS • • • AERIALS • • • COMBINATION LADDER TRUCKS

"What if that falling wall had bounced off my head instead of this M-S-A helmet!"

says Bernie Kush, Fireman
Omaha, Nebraska



Most firemen agree that it's best not to think of what could have happened *if* . . . but Bernie Kush of the Omaha, Nebraska, Fire Department rates a kind of special excuse if he wonders once in a while about his narrow escape.

It was a three-alarm fire, and things were happening fast. Fireman Kush was moving in with his hose, when he heard warning shouts from the chief. He looked up, and saw it coming . . . the entire wall was collapsing. He made a dash for cover, but it was too late. Bricks, rubble, debris crashed down. In seconds he was buried waist deep.

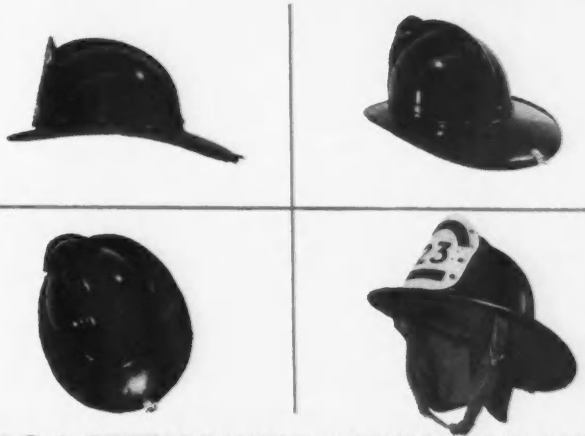
Fireman Kush commented later that he lost count of the number of times his helmet was hit by shattered wall-structure, but he did remember the one that struck hard enough to crack the plastic shell. It's easy to understand why Kush calls his helmet a "life saver."

MSA
SAFETY EQUIPMENT HEADQUARTERS

Call the M-S-A man on your every safety problem . . . his job is to help you

MINE SAFETY APPLIANCES COMPANY
201 North Braddock Avenue, Pittsburgh 8, Pa.
At Your Service: 76 Branch Offices in the United States

MINE SAFETY APPLIANCES CO. OF CANADA, LTD.
Toronto, Montreal, Calgary, Edmonton, Winnipeg, Vancouver, Sydney, N.S. • Representatives in Principal Cities in Mexico, Central and South America
Cable Address: "MINSAF" Pittsburgh



M-S-A STREAMLINED FIREMAN'S HELMET

Any way you look at it, the M-S-A Streamlined Fireman's Helmet has the appearance that firemen like. But that's only part of the story. This helmet provides double protection. The one-piece, high-pressure molded construction takes bumps and blows without passing them on. And its high dielectric strength protects against electrical hazards. It is made of laminated plastic, so it does not soften when exposed to water, moisture, or common chemicals, or warp with heat. Easily zipped-in winter liner assures all-weather comfort. Write for details.

COMPLETE LINE OF PUMPERS • • • SQUAD AND HOSE WAGONS • • • AERIALS • • • COMBINATION LADDER TRUCKS

FIREMEN
60 BATTERYMARCH ST.
BOSTON 10, MASS., U. S. A.

Sec. 34.65 (d) P. L. &
U. S. POSTAGE
PAID
Permit No. 766
Boston, Mass.

POSTMASTER: If undeliverable FOR ANY REASON, notify sender, stating reason, on Form 3547.

Check the Occupancy Fire Records you want and mail this easy-order form.

.....FR 54–1. Garages — 8 pages
.....FR 54–2. Supermarkets — 8 pages
.....FR 54–3. Foundries — 12 pages
.....FR 54–4. Oil Piers — 12 pages
.....FR 54–5. Grocery Warehouses — 12 pages
.....FR 54–6. Farm Property — 12 pages
.....FR 54–7. Department Stores — 8 pages
.....FR 54–8. College Dormitories, Fraternities, and Sororities — 12 pages
.....FR 54–9. Food Canneries — 12 pages
.....FR 55–1. Electric Generating Plants — 12 pages
.....FR 55–2. Truck Terminals — 8 pages
.....FR 55–3. Motor Boats — 12 pages
.....FR 55–4. Printing Plants — 12 pages
.....FR 55–5. Restaurants — 12 pages
.....FR 55–6. Oil Extraction Plants — 12 pages
.....FR 55–7. Cotton Warehouses — 8 pages
.....FR 55–8. Bakeries — 8 pages
.....FR 55–9. Gasoline Service Stations — 8 pages

. . . .**All of the above fire records ($7.00)**

FB-4-56

National Fire Protection Association
60 Batterymarch St., Boston 10, Massachusetts

Gentlemen: Please send me copies of the Occupancy Fire Records checked above.

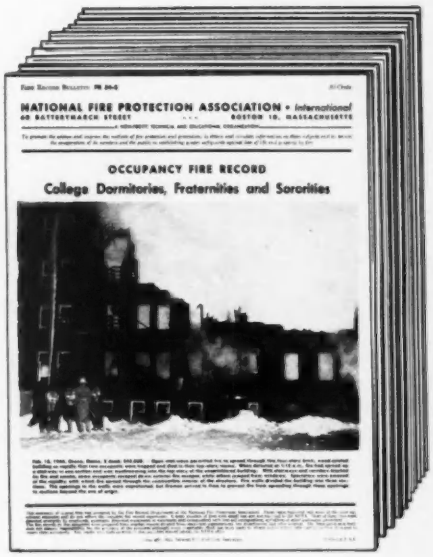
Name .....

Address .....

City or Town.....County.....

State.....

☐ **Enclosed find check or money order for $**..... ☐ **Please send bill**


NATIONAL FIRE PROTECTION ASSOCIATION • International
OCCUPANCY FIRE RECORD
College Dormitories, Fraternities and Sororities

Every inspecting fire fighter needs concise, up-to-the-minute information on fire experience. A group of new occupancy fire records are published by NFPA to fill this need. These illustrated 8½- by 11-inch pamphlets analyze fires which occurred in eighteen types of occupancies.

Suppose that you were about to inspect a gasoline station. By quick reference to "Gasoline Service Stations, FR 55-9," you would find NFPA's analysis of 100 service station fires, describing special hazards that existed in 75 of these stations and the causes of fires which involved common hazards. Also included is a list of NFPA Standards which have special recommendations pertaining to safe operation of service stations.

The other Occupancy Fire Records are equally informative and will be valuable for fire department inspection work and other reference. A complete set of these new Occupancy Fire Records should be in your fire station library. They will be particularly valuable to fire officers and fire fighters taking promotional examinations.

Single copies are priced at 50c each, with discounts allowed for quantity purchases.

The eighteen fire records (FR 54-1 through FR 55-9) are available as a set for $7.00. (List price $9.00.) A set of any 10 fire records may be obtained for only $4.00. (List price $5.00.)